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British Museum

Vol. IV., No. 1.

THE

FORTY-SIXTH ANNUAL REPORT

OF THE

WATSON

Botanical Exchange Club

1929—30.

Referees:

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CAMBRIDGE:

PRINTED BY R. I. SEVERS, SIDNEY STREET

1930

THE WATSON
Botanical Exchange Club

REPORT FOR 1929—30

LIST OF CONTRIBUTORS.

	Sheets
W. Biddiscombe	38
R. J. Burdon	83
J. Fraser	98
J. Groves	29
L. B. Hall	30
J. E. Little	205
J. E. Lousley	247
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F. Rilstone	37
Ida M. Roper	62
C. E. Salmon	13
S. London Bot. Inst.	183
H. S. Thompson	186
E. C. Wallace	495
J. W. White	134
I. A. Williams	26
Total	2020

Seed packets : J. E. Little 49, E. C. Wallace 14.

Seventeen members have contributed 2020 sheets of plants, which is slightly more than last year. The quality of the specimens was, on the whole, high ; but there is room for improvement here and there. I am quite convinced that no good purpose can be served by again commenting on the non-observance of rules in regard to the preparation, etc. of the parcels and plants.

Contributors will do well to remember that if possible more than the minimum of six sheets should be sent of each gathering. Notes and criticism in the Report lose some of their value if only a few members receive any one plant under discussion.

As in recent years, the Referees have seen all the specimens of the critical gatherings ; and in this respect we are indebted to H. W. Pugsley, H. J. Riddelsdell, the late C. E. Salmon, Dr. E. Drabble, J. Fraser, J. Groves, W. H. Pearsall, and Lt.-Col. Wolley-Dod. We have also received valuable notes from C. E. Britton, W. O. Howarth, J. E. Little, A. E. Wade, and J. W. White.

Some of the critical genera were well represented—Rosa, Hieracium, Euphrasia and Mentha especially so ; but more Rubi, Salices and Carices would be welcome next year. A useful parcel of plants was sent to Bergen Museum, which was much appreciated by Dr. Nordhagen. He would be very glad to receive any British adventitious plants, especially Cruciferae and Gramineae, and also Fumarias.

I may add that it has been a pleasure to carry out the distribution, and that I am personally grateful to many correspondents for help and advice upon botanical matters.

E. C. WALLACE,
Distributor.

Sutton,
Surrey,
March, 1930.

We are again indebted to Mr. Wallace for carrying through the distribution so efficiently, and for his energy in collecting and neatly drying nearly 500 sheets of useful specimens.

Much sympathy was felt last year for Col. Wolley-Dod in the prolonged and painful illness which he underwent, but fortunately in the early spring he made a final recovery and was able to examine and report upon the Roses.

It is with profound regret that we record the death of Mr. Arthur Bennett on May 2nd, 1929, and of Mr. C. E. Salmon on January 1st, 1930. Mr. Groves has kindly written a very suitable appreciation of the former, and it fell to my lot to say something on the beautiful life and work of the latter. For permission to reproduce photographs of both we have to thank Dr. Rendle as editor of the *Journal of Botany.* The portrait of Mr. Bennett was engraved on stone. We also mention regretfully the more recent passing of Prof. Augustine Henry who did so much travelling and collecting in China ; and who for many years was interested in this Club, and from time to time examined herbarium specimens of woody plants submitted to him. Before going to Dublin he had lived chiefly at Kew and at Cambridge, and he learnt much of his forestry on French soil.

We suffer also from the loss by resignation of several members, one of them perhaps only temporarily ; and we need fresh blood to take the place of those who have gone.

ARTHUR BENNETT.

Since the death of Mr. Bennett, Prof. J. W. Carr is the only original member of the Watson Club. When it was started in December, 1884, he was an undergraduate at Cambridge, and Bennett was the only Referee, but Bennett withdrew from membership in 1909; in 1921 he and Mr. E. F. Linton were made honorary members, and the former continued to examine specimens, write notes and occasionally send us plants.

H. S. Thompson,
May 6th, 1930. *Hon. Sec.*

ARTHUR BENNETT (1843—1929).

Arthur Bennett, sometime a valued referee of the Club, and for many years one of the best known and most helpful students of British botany, passed away on the 2nd May, 1929, close on the age of 86. He was born on the 19th of June, 1843, at Croydon, Surrey, in which town he was educated and resided all his life. From his school-days he had been attracted to natural history, first to geology, then to entomology, but soon settled down to botany, which was thenceforward the principal occupation of what leisure he could spare from his daily occupation. On leaving school he went into his father's business, that of a builder and decorator, of which he ultimately became the proprietor, and in which he took an active part practically to the day of his death.

It was always a wonder to us how he could find time to accomplish such an immense volume of botanical work in the intervals of a strenuous and exacting business. To the *Journal of Botany* alone his contributions, extending from 1876 to 1929, totalled about 200, and we are told that he wrote more than 180 notes and articles for other magazines and publications. His correspondence with British and Foreign botanists was very extensive, and he made it a rule never to leave a communication unattended to on the day of receipt. Every enquiry, if only from a child, received his careful and courteous attention, and it is difficult to overestimate the service he rendered to British botany by encouraging, helping and stimulating others.

He had a good all-round knowledge of the British Phanerogams, with the exception perhaps of a few very large critical genera, but it was the marshland and water plants which most attracted him. His most important work was in connexion

with *Potamogeton*, on which genus he became the recognised authority, and of which he described a number of new species, from various parts of the world. Apart from his native county I think his favourite hunting grounds were in the Eastern counties, especially the Norfolk Broads, where he was the discoverer in this country of that curious charophyte *Nitellopsis obtusa* (*Chara stelligera*, Reichenb.), and with his daughter of *Naias marina*. He accumulated a large herbarium numbering between 20,000 and 30,000 specimens, most of which are now conserved in the British Museum, partly by his own bequest, partly by that of his friend Mr. C. E. Salmon, who died soon after him, and to whom he had left the bulk of his plants. Some of his large collection of Potamogetons he bequeathed to Kew. His collection of Charophytes, British and Foreign, he had already generously given to the present writer's late brother and himself.

In addition to his extensive knowledge of the plants of the British Isles, he knew a great deal of the flora of Northern Europe, especially of the Scandinavian countries, including Iceland and the Faroe Islands. For many years he undertook the registration of "new county records" supplementary to *Topographical Botany*, and, at the time of his death, a second instalment of these, compiled in conjunction with Messrs. Salmon and Matthews, was in course of publication. In spite of Bennett's enthusiasm and his great driving power, he was extremely modest and retiring, and could never be induced to take a prominent part in any botanical gatherings, a matter of regret to his friends. At the same time he was always ready to lend a hand in any botanical work, and there were few British botanists of his time who were not indebted to him for kindly assistance, always willingly and promptly given.

He was a tall, spare, alert man, with particularly bright eyes, and, until quite latterly, almost black hair. An admirable photograph of him, taken by his wife, is reproduced (with a memoir by Dr. Druce) in the *Journal of Botany* for August, 1929 and in the present Report. He was twice married, having seven daughters by his first wife. To his second wife, for thirty years his loving and helpful partner, I am indebted for many particulars of his life and work. His example is an inspiring one. Without any special training in botany, and throughout his life with but little leisure to devote to it, he contrived by habits of industry and sheer hard work,

US. (N.H.)
BOTANY

CHARLES EDGAR SALMON.

directed of course by an unusually active mind, to make for himself an honoured position in the forefront of British botany. It was a genuine affection for plants that inspired him, and his botanical pursuits were always a labour of love.

J. Groves.

CHARLES EDGAR SALMON (1872—1930)

Not only this Club, for which he did so much since he first contributed specimens in 1891, but much else that is beautiful and of good report has suffered a grievous loss in the passing of Charles E. Salmon on New Year's day, 1930, after a few hours' illness. In Reigate and Redhill he will be especially missed, for "he filled a unique place in the community. He was an unusual man, so intellectual and yet so humble and so simple. He was not merely a nominal Christian, but a Christian at heart. Not only had he a rare interest in nature, but in many of the activities of the town; he was most valuable, though he never pushed himself forward. These were amongst the words spoken by a fellow-townsman on the occasion of the funeral" our member Mr. A. J. Crosfield tells us in an appreciation in *The Friend*, January 31, 1930. Mr. Crosfield knew Salmon from boyhood.

Though for most of his life in sympathy with Friends and Quakerism, C. E. Salmon did not actually join the Society of Friends until last autumn. This was characteristic of his thoughtful, studied deliberation in things that matter. But the same care was, as so many know, shewn in all his work, whether as an Architect, a Botanist, or what not. He undertook so much and did all so thoroughly, that occasionally one had completely forgotten, until the parcel was returned, that he had asked for the loan of certain herbarium specimens in which he was especially interested. But even when he became more and more occupied with affairs, or was in ill health, he would always eventually do his best to satisfy his correspondents. That was my experience of him as a correspondent and friend for thirty years.

C. E. Salmon was born on November 22, 1872, and educated privately and at Reigate Grammar School. When still at school he joined the Holmesdale Natural History Club, of which he was President at the time of his death. As an Architect he had a considerable practice in Reigate and neighbourhood, and he brought to bear upon his profession

that sense of refinement and simplicity that characterised his whole being. When the nation had awakened ten years too late to the disastrous despoiling of the countryside and of many a suburb, Salmon was already actively doing what he could to check the energy of the jerry-builder, and lessen the thoughtlessness or innate vulgarity of not a few motorists and others. It was not merely for selfish reasons that he acquired land adjoining the Pilgrims' Way in the neighbourhood of his pleasant home. Moreover he was for long and until he died Secretary of the local Open Spaces and Footpaths Preservation Society.

The modesty and kindness, as well as the strenuous life of Arthur Bennett, referred to by Mr. Groves, are equally applicable to Charlie Salmon. Indeed these two distinguished botanists were very old friends, and often in each other's company. The younger man was ever encouraged and helped botanically by his neighbour at Croydon ; and kindly encouragement to others became more and more one of Salmon's traits. He seemed always to see the best in people, and though so observant a man, never in the course of our long friendship did I hear or read in his letters a really unkind word of anyone, though on occasions he might rightly feel indignant.

Gratitude, even for the smallest attention, was ever apparent in him. I see this characteristic repeatedly in many of his letters which have been kept since 1898. Often it seemed almost quixotic. Nor must we omit to refer to his great hospitality, in which Mrs. Salmon so graciously shared. Many botanists and others, some of whom are no longer with us, could testify to this. I was struck with it even before his marriage, when he lived with his parents at " Clevelands." My last brief visit to " Ridgefoot," on the Pilgrims' Way, was one glorious day last September, after staying the week-end with Mr. Pugsley at Wimbledon. After lunch I was taken on to Reigate Heath, and we saw several of the rare plants which the drought had not burnt up completely. The walk ended with tea and a stroll through the delightful grounds of his friends at " Quarry Orchard," where many an Alpine gem was lingering.

Salmon took great interest in the Linnean Society, after he was elected a Fellow in 1902. He sometimes exhibited specimens, and took part in discussions. He served on the Library Committee, and was on the Council from 1920—23. His paper on " A Hybrid Stachys . . . " was published in the

Journal in 1919. He had been a Fellow of the South London Botanical Institute since 1913 ; and when President of the South-Eastern Union of Scientific Societies in 1928, his valuable address was on " Fruits and Seeds as a means of distinguishing Allied Plants."

Mr. E. G. Baker's account of C. E. Salmon (*Journal of Botany*, Feb., 1930) is followed by a useful list of some 72 of his principal botanical papers which started in 1893 in that Journal; and by five other important papers on botany which appeared in the Proc. of the Holmesdale Club, the *Cambridge British Flora* and elsewhere. There are about sixty more of his notes and articles published in the *Journal of Botany*. Among his other important works was the Botany Introduction and Chapter on Phanerogamic Plants in the " *Victoria County History of Suffolk*," 1911.

Salmon's recent work for our Exchange Club is well known to present members, but it may be re-called that he acted, jointly with his brother Ernest, as Distributor for five successive years, 1897—1901, and he has been one of the most valued Referees since 1910. Shortly before his marriage in June, 1905, to Miss Agnes Bowyer, he was particularly pleased by the presentation made him by this Club (with the aid of several individual donations from members) of Coste's *Flore de la France* and another book. In a letter to me dated Feb. 24, 1920, he again referred to " that valuable and useful wedding gift. I have used the book constantly since then, as you know." Although, like others of our members, he was a member of and did much good work for the senior and larger Exchange Club, he was opposed to any amalgamation of the two Clubs, and this desire to keep the individuality of the " Watson " grew as time went on.

Salmon did good work on many groups of Phanerogams, and had a profound knowledge of the British flora. He was the recognised authority on the genus *Statice*, and parts of his unfinished monograph appeared from time to time in the *Journal of Botany*. In preparation for this he was entrusted with valuable sets from both Europe and America. It is to be regretted that he did not live to see the completion of his extremely careful and comprehensive *Flora of Surrey*, though most of it was left in corrected type. From the MSS. and notes left by the author, it is understood this important work, his *magnum opus*, will be completed at the British Museum (Nat. Hist.).

In the preface to the eleventh edition of the *London Catalogue of British Plants* (1925), Mr. F. J. Hanbury says : " The preparation has been rendered possible by the willing and unstinted labour of Mr. C. E. Salmon. It is he who carried through a laborious piece of work which has made serious inroads on his time during several years." Salmon also collaborated with Bennett and Prof. J. R. Matthews in the second "Supplement" to Watson's *Topographical Botany* which has just been finished as a Supplement to the *Journal of Botany*.

My first meeting with Charles Salmon was in August, 1902, when we spent four days together botanizing on the West coast of Lancashire. His keenness and vivacity were immediately inspiring. The following July I was in the Eastern Pyrenees with James Backhouse ; and when in August Salmon was at Mont Louis with Messrs. Bucknall and White he wrote, " I think I am in your room here, as there are seeds of some *Cynoglossum* in the towel ! "

Though he travelled so widely in Britain, he was unable often to get to the Continent ; but it must have been in 1908 when I was summering near the Franco-Swiss Frontier, chiefly at the Col de la Forclaz, that he was at Chamonix ; and on meeting by arrangement I remember how great was his enthusiasm over the flowers and the glaciers and Aiguilles of Mont Blanc. It pleased him especially to come across certain plants in the Alps which he had often seen growing in the Highlands of Scotland or elsewhere in smaller quantity and under different conditions.

His visit to Savoy with his wife and younger daughter, last summer, was a great joy to them. Most of the time was spent in the delightful district of Tignes and Val d'Isère (6000 ft.) where he made an attractive collection of beautifully pressed Alpine plants. The Alchemillas and Gentians especially pleased him.

All his friends will share the satisfaction of Mrs. Salmon's feeling of gladness " that during the last six months Charlie had been well—very well indeed, and had so enjoyed everything. It is good, too, to know that he had no suffering, but just seemed to almost slip away, so peaceful was his end." The funeral, on January 4th, was at the Friends' Burial Ground, Reigate. A remarkable evidence of respect and love was manifested on all sides. His widow, two daughters and a young son survive him.

Salmon's very large British herbarium, which comprised the collections of Alfred W. Bennett, H. Tuke Mennell and others, was bequeathed to the British Museum; it latterly also included much of Arthur Bennett's great herbarium.

H. S. Thompson.

C. E. SALMON: A Personal Note.

By Mr. G. R. Stirling Taylor (Journ. Bot., 1930, 53.)
Quoted with kind permission.

. . . "Behind the obvious façade of the enthusiasm with which he pursued his botanical work, there lay a character which was sometimes hard to analyse, just because it was so simple and direct. One gets so used to human beings who act in very involved ways—partly because they are not sure what they want to do, partly because they want to conceal their motives and deeds. Charlie Salmon was spared all such manœuvrings, for he had two plain rules which seemed to govern all his life: common sense and absolutely straightforward honesty—and these rules put him apart from so many of his fellows who did not share his high ideals. . . .

Since it was impossible for him to have done anything mean himself, he, perhaps, was never conscious of any urgent need for passing laws for controlling less amiable persons. . . . He had no affectations; . . . full of humour, and entirely devoid of any selfish ambitions which would interfere with anyone else's happiness; his sympathy for others was deep. . . ."

———

Correction to 44th Report, p. 445.

Salix fragilis × *cinerea*? Chertsey Bridge, Woking.—W. Biddiscombe. I regret an error made regarding the above, which must have been done on one of the many dark days in autumn. See also 45th Report, p. 500. The leaf-shoot was *S. fragilis* L., abnormal because stooled and gathered too young. The catkins, only half developed, were *S. triandra* L. var. *concolor* Anderss. forma *angustifolia* Anderss. I have seen both of Mr. Biddiscombe's bushes. I thank Mr. Little and Mr. Pearsall for calling my attention to the error.—J. Fraser.

45th Report, 1928-1929.

P. 490, *Salix* [742] Little. *S. fragilis* L. (*vix infecta*). The wide-spreading branches are typical of *S. fragilis*.—R. Görz.

Salix [549] Little. I consider this willow *S. alba* × *fragilis* × *pentandra*, near *S. fragilis*. *S. alba* is indicated by very weak pubescence of the leaves; *S. pentandra* not only by the triandrous and tetrandrous characters, but also by the close cartilaginous serration of many leaves.—R. Görz.

45th Report, 1928-1929.

P. 486. × *Mentha gentilis* L. [Ref. Z 107] *Teste* J. Fraser. Stanmore Common, Middlesex, Lousley. Some doubt was expressed about the correctness of the above name in the Report. Mr. Little's sheet could not be found (it was possibly sent to Mr. Salmon, and Mr. Little cannot trace it—Ed.) but Mr. Lousley sent me his own sheet for examination. I now confirm my previous diagnosis for this hybrid, and find the stem more hairy than the average. The calyx-teeth and the pedicels should be glabrous in the type, but I find a small cluster of 1-3-jointed hairs where the calyx joins the pedicel, and a few scattered hairs on the pedicels of some of them. . . . Mr. Lousley assures me that he and Mr. Wallace had carefully compared the specimens before distributed, and there was no mixture.—J. Fraser. This needlessly long note has been considerably curtailed.—Ed.

Corrections to the Last Report.

P. 465, l. 7.—For last line *read* first line.
P. 466, l. 17.—For Lej. *read* Lag.
P. 482, bottom.—For nearly *read* probably.
P. 483, l. 5.—For Martins *read* Martius.
P. 483, l. 6.—For 1917 *read* 1817.
P. 487, middle.—For *intergerrimum* read *integerrimum*.
P. 497.—*Bromus velutinus*. Mr. Williams wrote that his naming was confirmed by the late C. E. Salmon.

Ranunculus Godronii Gren. (*R. radians* f. *Godronii* Gren.) Field pond near Stanton Wick, N. Somerset, May 17, 1929. Mr. W. H. Pearsall, who has seen a specimen, agrees that this gathering affords excellent examples of Grenier's plant—

form, variety or species as one pleases—and that it is far more nearly akin to *R. radians* Rev. than to *trichophyllus* or *Drouetii* with which in the *Lon. Cat.* it is associated in doubtful congruity. —Jas. W. White. Yes, I should so label it.—J. Groves. *R. radians* Revel, var. *Godronii* (Gren.). Beautiful examples of this variety. Its relationship with the type is at once apparent from a study of these carefully-displayed specimens.—W. H. Pearsall.

Ranunculus Baudotii Godr. [Ref. A 42]. Pond by trackside near Grade Church, Lizard, West Cornwall, May 30, 1928. —J. E. Lousley. Yes.—J. Groves. Good examples of this species—fruit especially well-developed and typical.—W. H. Pearsall. Yes.—J. Fraser.

Ranunculus Baudotii Godr. var. *marinus* (Fries). [A 40]. Hollow in sandhills near Berrow, North Somerset, May 20, 1929.—J. E. Lousley. Yes.—W. H. Pearsall. The carpels are bristly and the peduncles short. I should say *R. trichophyllus* Chaix.—J. Groves.

Ranunculus Baudotii Godr. var. *confusus* Godr. [A 43]. Roadside pool near Penhale, Mullion, West Cornwall, May 23, 1929.—J. E. Lousley. I suppose a form of *R. Baudotii*, though I notice one head of carpels quite hairy. It would be interesting to know if the very weak growth is due to any external cause.—J. Groves. Extremely slender specimens, but—like all Mr. Lousley's examples of this genus—they amply justify their label.—W. H. Pearsall.

Ranunculus lutarius Bouvet. [Ref. A 41]. Hollows in cart-tracks above Kynance Cove, Lizard, West Cornwall, May 24, 1929.—J. E. Lousley. Yes.—J. Groves. I agree.—J. Fraser. Correctly named, in my opinion.—W. H. Pearsall.

Ranunculus hederaceus L. [A 39]. Roadside gulley, Church Cove, Landewednack, West Cornwall, May 23, 1929.—J. E. Lousley. Yes.—W. H. Pearsall. Yes, fairly typical.—J. Groves.

Berberis vulgaris L. One bush only in hedge near Thirty Acre Barn, Ashtead, Surrey, May 31 and Oct. 10, 1929. I think native.—E. C. Wallace. It occurs fairly frequently in hedges and on commons in Surrey, but is probably carried there from gardens by birds.—J. Fraser. Complete specimens, showing flowers and fruits. It was presumably planted at Ashtead. *Berberis* appears to be now rare as a wild plant

in Britain.—H. W. Pugsley. I would go further, and suggest that it was *never* native in most of its recorded stations (usually hedgerows) in Great Britain. Moreover, see *Top. Bot.* ed. 2. And in *Cybele Hibernica*, ed. 2, one reads :" Occurs in many localities, but is always planted or an escape or outcast." Probably the fact that the ill effects of Barberry upon corn was known long before any explanation was forthcoming, and that the bushes were ruthlessly removed from hedgerows need not affect the question of its status as a native or denizen in these islands.—H. S. Thompson.

Papaver Argemone L. Packets of pods. Priddy Lane, Hitchin, Herts., Aug. 9, 1928.—J. E. Little.

Fumaria [*occidentalis* Pugsley.] [A 60]. Hedgerow at entrance to Penhale Estate, Helston, West Cornwall, May 27, 1929.—J. E. Lousley. Is *F. Bastardii* Bor. var. *hibernica* Pugsl.—H. W. Pugsley.

Fumaria capreolata L. By Gas Works, Tenby, Pembrokes., v.c. 45, July 5, 1929.—Ida M. Roper. Yes, var. *Babingtonii* Pugsl.—H. W. Pugsley.

Fumaria [*capreolata* L.] [A 78]. Laneside, Gunwalloe Village (which is some miles from Gunwalloe sands), Lizard, W. Cornwall, May 28, 1929.—J. E. Lousley Is *F. Bastardii* Bor. var. *hibernica* Pugsl.—H. W. Pugsley.

Fumaria ———. [Ref. 1286]. Waste ground in Minehead, Somerset, v.c. 5, July 19, 1929.—E. C. Wallace. Is *F. Boraei* Jord. var. *britannica* Pugsl. with depauperate flowers.—H. W. Pugsley.

Fumaria ———. Hookham, Lurgashall, W. Sussex, Sept. 19, 1929.—R. J. Burdon. A worn-out plant of *F. Boraei* Jord., probably var. *gracilis* Pugsl.—H. W. Pugsley.

Nasturtium amphibium R. Br. By Burford Bridge, Boxhill, Surrey, July 4, 1904. Coll. A. O. Hume ; Comm. S. Lond. Bot. Inst. Evidently this is the var. *indivisum* D.C., in other words the type.—J. Fraser. Yes, the ordinary form of *N. amphibium* R. Br., with the leaves auricled, i.e., var. *auriculatum* D.C., not var. *variifolium* D.C.—E. Drabble.

Erophila verna E. Meyer. [Ref. 1287]. Sandy field near Shackleford, Surrey, May 10, 1929.—E. C. Wallace. By O. E. Schulz's Key, this runs down to *E. Boerhaavii* Dum., rather than *E. verna* ; and under the former it closely matches examples of var. *decipiens* Jord., named for me by Schulz.

—C. E. Salmon. Yes, I think it may be left under what has been called the segregate *E. verna*.—J. E. Little. Were the fruits *terete* when fresh? Their outline is exactly like that in my *oedocarpa* (Journ. Bot., 1926, p. 45), though the plants are taller and the leaves more densely hairy. At Prof. Harm's request I sent specimens of *oedocarpa* to Dr. O. E. Schulz in May, 1926. He stated that the plant was unlike any *Erophila* with which he was acquainted, and included it in his Monograph in *Das Pflanzenreich*, 1927. So far I have seen *oedocarpa* only in Cheshire and Derbyshire. Mr. Wallace's plant is very close to it, but without the evidence of fresh capsules it is difficult to be certain of its identity. —E. Drabble.

Lepidium latifolium L. Bank of River Colne, near Wivenhoe, Essex, June 28, 1904. Coll. A. O. Hume; Comm. S. Lond. Bot. Inst. My specimen is peculiar in having the serrated leaves passing so high up on the stem. Evidently the species varies in that respect.—J. Fraser.

Lepidium ruderale L. (1) Gt. Wymondley, Herts., Sept. 29, 1928, Aug. 6, 1929; there is sometimes a *narrow* margin to the seed. (2) Mill yard, Broxbourne, Herts., Nov. 9, 1929.— J. E. Little. Beautiful specimens of this Crucifer, which often loses most of its leaves in dry situations.—J. Fraser.

Thlaspi alpestre L. Winch Bridge, Upper Teesdale, Durham, June 3, 1903. Coll. A. O. Hume. Comm. S. Lond. Bot. Inst.

Thlaspi alpestre L. var. *occitanicum* (Jord.). Roadside walls near leadworks, Llanrwst, Carnarvonshire, June 10, 1905. Coll. A. O. Hume. Comm. S. Lond. Bot. Inst. The glaucous leaves and the broad wings of the more advanced silicules evidently make the variety correct; but I would have liked to see the auricles of the leaves more acute. The small and nearly obsolete teeth to the leaves is another distinction.—J. Fraser. This is not *T. occitanicum* Jord., which, as pointed out by Mr. White (Fl. Bristol, p. 159), is a biennial plant with ± toothed leaves. The British forms of *T. alpestre* need further revision.—H. W. Pugsley. This is not *Th. occitanicum* Jord., though I believe it is what has often been so called. The fruits do not agree with Jordan's figure, Obs. iii, pl. I bis, fig A; the wings are much less prominent and more rounded, and the whole outline of the fruit is less triangular. Moreover the leaves are entire-margined, not coarsely and irregu-

larly crenate as in Jordan's figure of *occitanicum*. The long style removes it from *sylvestre* and *brachypetalum*. It would seem that long-styled plants of *sylvestre* have often erroneously been taken for *occitanicum*. The only specimen in my herbarium whose fruits resemble those of Jordan's figure was sent to me from Malham, Yorkshire, in June 1924, by Miss M. E. Page, and they are too immature for complete certainty. Why did the name appear as *occitanum* in Babington Man. ed. 6 *et. seq.*, Watson's Cybele, L. Cat. ed. 7, Hooker's Stud. Flora ed. 3? Jordan, Obs. iii, wrote *occitanicum*, and he is followed by Rouy and Foucaud (Fl. France) and by Dr. Druce in List, ed. 2. As some doubt has been expressed as to the identity of the Derbyshire *Thlaspi* with *Th. virens* Jord., it may be mentioned that a careful examination of this plant, with which I am very familiar, has convinced me that the attribution is perfectly correct.—E. Drabble.

Iberis amara L. [787]. Selected. Flowers violet-tinged. Near Tingley Wood, Herts. and Beds., July 13, 1929.—J. E. Little. Intermixed with plants having pure white flowers, but not quite so abundant. For notes on the Royston plant see W.E.C.R. 1912, 432.—J. E. Little.

Viola lactea Smith. Dousland, Dartmoor, S. Devon, June 9, 1902. Coll. A. O. Hume. Comm. S. Lond. Bot. Inst. Dwarf, but otherwise beautiful specimens of *V. lactea*. It differs from *V. stagnina* Kit. in the absence of stolons, in the more or less pointed petals, and in the leaves being rounded or cuneate at the base (not subcordate).—J. Fraser.

Viola latifolia Drabble. [A 56]. Near Nohome Farm, Langley Bottom, near Epsom Downs, Surrey, July 1, 1929.—J. E. Lousley. Some of the specimens do not show the spreading branches, but where these are present the plants are typical.—E. Drabble.

Viola ———. [1288]. Cornfield near Thirty Acre Barn, Ashtead, Surrey, May 31, 1929.—E. C. Wallace. Nicely prepared specimens of *V. segetalis* Jord. The tall upright plants are typical; the smaller ones are unquestionably *segetalis*, but are stunted. Some of the specimens with broader, more obtuse leaves approach *forma obtusifolia*.—E. Drabble.

Polygala vulgaris L. Flowers pink, up to 20 on one stem! Leaves alternate to base of stem. Wing sepals slightly mucronate; central vein nearly simple, marginal veins

anastomosing. Ashcott Peatmoor, N. Somerset, July 13, 1929.—H. S. Thompson. A puzzling plant, coming between *vulgaris* and *dubia* (*oxyptera* auct. angl.). The smaller flowers, capsule and seed recall the latter plant rather than *vulgaris*, and A. W. Bennett (*Journ. Bot.* 1877, 171) truly remarks that there are all intermediate stages between the two; although *in its extreme form dubia* differs so widely from *vulgaris* as " almost to justify its being erected into a species." Bennett (loc. cit.), arranged our present *P. serpyllifolia*, " var. *ciliata* Lebel," *P. oxyptera* Reichb., and var. *grandiflora* Bab., *all* as varieties of *P. vulgaris* L.—C. E. Salmon.

Silene Cucubalus Wibel var. *pubescens* DC. Burgh Heath, Surrey, June 20, 1929.—E. C. Wallace. Yes: this is the hairy form, which often grows intermixed with glabrous plants. It is a variation, but should it on this single character of hair-clothing be reckoned a variety?—J. E. Little. Quite correct. It is not uncommon in Surrey; but on chalk downs it is often dwarf, with a glaucous grey hue. The vigorous specimens sent me seem to have grown in a little shade.—J. Fraser. The plants were in full sunlight.—E.C.W. Yes, but by no means extreme, either in its pubescence or in the ciliate-scabrous leaf margins. The more extreme forms are sub-var. *villosa* Hardouin (*ap.* Bréb. Fl. Normandie) I suppose, of which I have fine examples from Southfleet, Kent. The short compact lateral cymes in Mr. Wallace's plant are very unusual for *S. Cucubalus*, and rather resemble those of *nutans* and *dubia*. This is a very interesting plant. —E. Drabble.

Silene Otites L. Barnham Cross Common, Suffolk, June 5, 1920.—Miss M. Cobbe. Comm. F. Rilstone.

Silene anglica L. (seeds). Black Down, W. Sussex. Aug. 23, 1928.—J. E. Little.

Lychnis macrocarpa Boiss. ♀ and ♂ Cult. Freshwater, 1929. Grown from seed brought from Randazzo, Sicily, 1926.—J. Groves. This fine plant being included (as an alien) in Dr. Druce's *British Plant List*, perhaps specimens may be of use to some members.—J. Groves. Occasionally seen in Mediterranean regions, this is more robust and glandular and with broader leaves than *alba*, but also fragrant in the evening. The calyx-teeth are lanceolate-acute, and the ten teeth of the capsule are reflexed. When once seen it cannot be mistaken.—H. S. Thompson.

Arenaria verna L. var. *Gerardi* Hook. fil. The Lizard, West Cornwall, June 21, 1913.—C. C. Vigurs. Comm. F. Rilstone. Of the Lizard specimens from a gathering by F. Jose dated 1905, Mr. Fraser writes :—The lower leaves are adpressed to the stem, and that is the strongest feature of the var. *Gerardi*.

Sagina maritima G. Don. On shingle by West Looe River, E. Cornwall, July 1929.—F. Rilstone. Yes, good average specimens of the type.—C. E. Salmon. This belongs to the group in which the central stem, as well as the lateral branches bloom. I agree with the name.—J. Fraser.

Spergularia marginata Kittel var. *glandulosa* Druce. Salt marsh, mouth of R. Brue, Somerset, v.c. 6, July 13, 1929. Seeds winged ; larger, more robust plants with longer leaves than *S. salina*, which is usually more stocky.—H. S. Thompson. An unusually lax form of the variety. *Vide* Journ. Bot. lix, p. 130 (1921).—H. W. Pugsley.

Claytonia alsinoides Sims. Naturalised in a plantation near Petersfield, Hants., v.c. 12, May 20, 1929.—Ida M. Roper. I agree. It has the habit of *C. sibirica* L., but the two cauline leaves are much longer, more rhomboid and often shortly acuminate ; whereas the pair of cauline leaves of *C. sibirica* are suborbicular, and shortly cuspidate. Some authorities make the two specifically the same ; Dr. Druce makes *C. alsinoides* a variety of the other. They come from N. America, and *C. sibirica* from Northern Asia also.—J. Fraser.

Hypericum undulatum Schousb. Carnkief, Perranzabuloe, W. Cornwall, Aug., 1928.—F. Rilstone. Very acceptable.—E. C. Wallace. This Western plant, so very rare on the Continent and in Britain, though frequent enough in Cornwall and about Plymouth, was not recorded as British until Archer Briggs published it in Journ. Bot., 1864, p. 45, and in Ed. III. of Eng. Botany about the same time. The figure is unsatisfactory. So is that in a paper by Babington in Journ. Bot., 1864, p. 97. When a young botanist, Briggs mistook it for *dubium*, and recorded it under that name in The Phytologist, 1861, p. 369. But Cunnack of Helston " lost the chance of being the first recorder of it as a native in Britain " because a correspondent told him it was *H. perforatum*. The earliest specimens gathered by myself came from " Boggy ground near Truro, July, 1886."—H. S. Thompson.

Cytisus scoparius Link. var. *prostratus* Bailey. [A 52]. Gue Graze Valley, near Lizard, West Cornwall, June 1st, 1929. This form, creeping over the rocks, and never lifting itself away from their friendly shelter, with its silvery leaves is of very different appearance from the normal inland form. Probably it is only an extreme state, owing its form to the very strong winds which blow at the Lizard.—J. E. Lousley. I have not previously seen this from a wild habitat, but prostrate forms arise from seeds in cultivation. The branches of the specimen sent me are all in one plane, and obviously had been prostrate when gathered.—J. Fraser.

Lotus tenuis Waldst. et Kit. Foot of Blackdown, W. Sussex, Aug. 13, 1929.—R. J. Burdon. I agree. The leaves and their stipules are very narrow in this species, and the flowers few on a stem.—J. Fraser. Yes , it seems a scarce plant, at least in Surrey.—E. C. Wallace. Mr. Wallace's comment is apt. Though apparently widely spread in Britain and more or less on the Continent, "rare and perhaps always introduced" in Ireland, I have very rarely seen it either in the British Isles or in central or western Europe. It is synonymous with *L. tenuifolius* Reichb.—H. S. Thompson.

Anthyllis Vulneraria Linn. var. *coccinea* Linn. [A 19]. Cliff above Kynance Cove, West Cornwall, England, May 25, 1929. This variety grows intermixed with plants with normal coloured flowers and intermediates; while plants which would appear to pass for "*coccinea*" may sometimes be found right off the Lizard rocks as at Gunwalloe. To my mind it is not a very convincing variety.—J. E. Lousley. Mr. Wallace asked me to write a note on this plant, but we are hoping to be further enlightened on the group when Mr. Barton is able to continue the work he started a few years ago.—H. S. Thompson.

Prunus Cerasus Linn. Wood near the Quell, Lurgashall, W. Sussex, April, 1929.—R. J. Burdon. Yes.—J. Fraser.

Rubus ———. Burgh St. Margaret, Norfolk, July 23, 1929. —R. J. Burdon. The panicles are *R. Lindleianus* Lees; some of the stem pieces are too. Most of the stem (returned separately) comes from three other forms, and should be destroyed. I do not think *R. vulgaris* Whe. and N. is identical with *Lindleianus* Lees, so far as I have seen specimens.—H. J. Riddelsdell.

Agrimonia Eupatoria L. [800] ? var. *sepium* Bréb. Sacombe Pound, Herts., Aug. and Sept., 1929.—J. E. Little. In the absence of fruit this very robust (up to 3 ft. 6 ins.) much-branched form is deceptive. The fruiting calyx is sometimes slightly campanulate, but the furrows are continued to the base. It occurs also in W. Sussex (Black Down), with smaller plants, and with *A. odorata* Mill.—J. E. Little. Yes, this seems to me to be *sepium* Bréb, but I think the so-called variety is merely coarse, well grown *Eupatoria*, i.e., a mere *state* (Mr. Little knows my views about this plant). In Derbyshire and the I.O. Wight it is the usual form in the hedgerows. To me the odour is as strong, or nearly as strong, as that of *odorata*.—E. Drabble. I agree. This state is sometimes mistaken for *odorata*.—H. S. Thompson.

Agrimonia odorata Mill. [815]. Near Parkhurst House, Black Down, W. Sussex, Aug., 1929.—J. E. Little. *Fruits*, Sept. 21, 1929. Leg. R. J. Burdon. Comm. J. E. Little. The large fruits, with their calyx-tube without furrows, and the lower hooked bristles reversed, are good evidence of the species, even if the odorous glands on the leaves were overlooked.—J. Fraser.

Poterium polygamum Waldst. and Kit. [1289]. Hedge-bank, Polesden Lacy, Bookham, Surrey, June 9, 1929.—E. C. Wallace. The acute ridges or wings of the hypanthium (calyx-tube) of the female flowers show this to be var. *stenolophum* Jord. I have both varieties from Surrey, but the plants are not very persistent.—J. Fraser.

Rosa arvensis Huds. [438]. In abundance, Great Bookham Common, Surrey, Sept., 14, 1929. Much more abundant here than I have found it elsewhere in Surrey.—J. E. Lousley. This is just typical *R. arvensis* Huds. I do not think it necessary to distribute such very common and easily identifiable varieties, unless they are suspected of being one of the rarer ones, which the collector does not state to be the case. A. H. Wolley-Dod. To be formal, according to the book, I would label this *R. arvensis* Huds, var. *vulgaris* Ser., that is the type. I have seen plenty of it on Bookham Common. —J. Fraser.

Rosa stylosa var. *Garroutei* Rouy. North side of Hogsback Road, Guildford, Surrey, Aug. 15, 1929. The irregular serration of the leaves and the small roundish fruits seem to place this as the var. *Garroutei*. A rather striking feature in the

growing bush was the dark vivid green of the leaves. Peduncles only slightly glandular.—W. Biddiscombe. This is not var. *Garroutei*, which should be more decidedly biserrate. I do not regard this as more than slightly irregular simple serration. There is considerable variation in the individual specimens, some of which look quite off type, but all may pass for *R. stylosa v. systyla*.—A. H. Wolley-Dod.

Rosa canina. Group Scabratae var. *latebrosa* Déséglise. Burningfold, near Dunsfold, Surrey, Aug., 5, 1929.—W. Biddiscombe. The subfoliar glands are not numerous, some of the leaves being bare ; but the other features, e.g., acicles on the stems, I think place it as *latebrosa*.—W. Biddiscombe. Yes, I think certainly correct. The secondary armature is weaker than in typical specimens and the subfoliar glands are few, as is sometimes the case, but the very strong biserration is characteristic of the Scabratae. The subglobose instead of ovoid fruit is untypical. It is a rare variety, only known from about half a dozen counties. This is a record for Surrey.—A. H. Wolley-Dod.

Rosa ———. By Finlarig Castle, Killin, Mid Perthshire, v.c. 88, July 28, 1929.—Ida M. Roper. One sheet only sent for naming. This is *R. dumetorum* Thuill. var. *Déséglisei* Chr. I feel fairly sure of the name, but it is the first record of it, or of any of its group, for Scotland, except two quite doubtful ones of var. *Lucandiana*. A most interesting find. —A. H. Wolley-Dod.

Rosa mollis Sm. [812]. Longmorn, Morayshire, Sept. 12, 1929.—Leg. K. D. Little. Comm. J. E. Little. Quite correct for var. *typica*, though here and there a slightly glandular leaflet may be found, since the forms run into one another.—A. H. Wolley-Dod.

Rosa mollis Sm., var. *caerulea* Baker. Crianlarich-Tyndrum, Mid Perth, v.c. 88, Aug. 4, 1929. Ida M. Roper. Correctly named. This is the normal form with most of its leaflets glandular beneath. An occasional fruit or peduncle, or both, is hispid, as may be found on most bushes of *v. caerulea*. When collecting for distribution it is best to avoid these off-type pieces.—A. H. Wolley-Dod. I agree with the varietal name. The small, smooth globular fruits, and the numerous subfoliar glands are quite characteristic.—J. Fraser.

Rosa omissa Déségl. By the Dochart, Killin, Mid Perth, v.c. 88, July 31, 1929.—Ida M. Roper. This is *R. omissa*

var. *typica*, fairly typical though some of its leaflets are almost glandular enough for var. *resinosoides*.—A. H. Wolley-Dod.

Rosa rubiginosa L. [813]. Longmorn, Morayshire, Sept. 12, 1929.—Leg. K. D. Little. Comm. J. E. Little. Correct. I would label it var. *typica*, under which I now include both vars. *comosa* and *apricorum* as inextricably mixed forms.—A. H. Wolley-Dod.

Rosa rubiginosa [var. *echinocarpa* Gren.] Woking, Surrey, Sept. 12, 1929. Gathered from a bush by the Basingstoke Canal, probably bird sown, for *rubiginosa* is not common on the Bagshot Sand. It was collected rather late, hence most of the glands have fallen from the fruits, being rather deciduous.—W. Biddiscombe. Not at all like var. *echinocarpa*, which should have very mixed armature and very hispid, often echinate, fruit. Here some of the barren stems have mixed armature, but they are always misleading, and should never be taken as guide for any feature. Many of the leaflets are glandular on the upper surface, as in strong forms like *Corstorphinae*, but this has not its leaflets large enough for that. I should put it under type, nearest var. *comosa*, but I now combine that with var. *apricorum* as the type of *R. rubiginosa*.—A. H. Wolley-Dod. Some of the leaflets on the fruiting branches have some scattered glands on the upper surface ; but the fruits are very poorly furnished with eglandular acicles, no stalked glands. I would name this var. *comosa* (Rip.) I have specimens with much more prickly fruits but without the stalked glands like the peduncles. Lt.-Col. A. H. Wolley-Dod said they were weak specimens of the variety.—J. Fraser.

Bupleurum rotundifolium L. In sainfoin, near Tingley Wood, Herts., June and July, 1929.—J. E. Little. Under special conditions of cultivation, these weeds of arable chalk land, *Bupleurum*, *Carum Bulbocastanum*, and *Ajuga Chamaepitys*, now contributed, appear in great abundance for a season or two, and then with a change of crop again diminish. —J. E. Little.

Carum Bulbocastanum Koch. Near Tingley Wood, Herts., June and July, 1929.—J. E. Little. A rare and local plant, like all the British species of Carum. This is confined to the chalk formation. There is a record that pigs were at

one time fed on the tuberous roots of this species in Herts., which I hope has now been abandoned.—J. Fraser.

Carum verticillatum Koch. Helensburgh, Dumbartonshire. Coll. W. R. Sherrin, Aug. 1929. Comm. S. L. Bot. Inst.

Rubia peregrina L. Among bushes on Clifton Down, Bristol, West Gloucester. July 30, 1929.—Jas. W. White.

Inula Helenium Linn. West Kennack Sands Valley, W. Cornwall, July 30, 1902. Coll. A. O. Hume. Comm. S. Lond. Bot. Inst.

Anthemis arvensis Linn. Cornfield near Thirty Acre Barn, Ashtead, Surrey, June 12, 1929. Rather a scarce plant in Surrey.—E. C. Wallace. Correct.—J. Fraser and H. W. Pugsley.

Senecio vulgaris L., var. *radiatus* Koch. = *S. erectus* Trow, var. *radiatus* Trow. Railway siding, Avonmouth, West Gloucester, Aug. 20, 1929.—Jas. W. White. This seems correct to me, because the principal lobes of the leaves are triangular, as in *vulgaris*, whereas the leaves of what I have for *S. squalidus* × *vulgaris* have the lobes oblong to linear.—J. Fraser. Yes, nicely dried to show the lingulate outer florets.—E. Drabble.

Centaurea ———. [A 79]. Moist ground near Lucas Green, Brookwood, Surrey, July 7, 1929.—J. E. Lousley. A small-headed plant with brownish phyllary-appendages and somewhat intermediate between *C. obscura* Jord. and *C. nemoralis* Jord. On account of the sparsely-branched habit, and by reason of the comparatively coarsely-pectinated appendages, I think this gathering is best regarded as a form of *C. obscura* Jord.—C. E. Britton.

Hieracium [*chlorophyllum* Jord.]. [A 12/A]. Chalky slopes below Ranmore Church, near Dorking, Surrey, June 24, 1929. —J. E. Lousley. This is a variety of *H. serratifrons* Almq., very close to *H. lepistoides* Johanss.—H. W. Pugsley.

Hieracium ———. [1291]. Wall at Polesden Lacy, Bookham, Surrey, June 9, 1929.—E. C. Wallace. This is another form of *H. serratifrons*, differing from Mr. Lousley's plants by its yellow styles. The narrow and little toothed foliage is probably due to its place of growth, a wall-top.—H. W. Pugsley.

Hieracium ———. Ramsfold, Lurgashall, W. Sussex, Aug. 12, 1929.—R. J. Burdon. A strong form of *H. serratifrons*.—H. W. Pugsley.

Hieracium ———. [A 13/b]. Shaded wooded bank between Ranmore church and Dorking, Surrey, June 24, 1929.—J. E. Lousley. Is this *H. grandidens* Dahlst?—J. E. Lousley. I think this is conspecific with A/12A, the differences being due to habitat. It seems to me to be nearer to *lepistoides* than to *grandidens*.—H. W. Pugsley.

Hieracium [*pellucidum* Laest.]. See Linton, page 42 of "British Hieracia." [Ref. A 22]. Between West End and Heatherside, Frimley, Surrey, July 8, 1929.—J. E. Lousley. This belongs to the *sciaphilum* group, and is perhaps *H. chlorophyllum* Jord. But the specimens are of stunted growth and not characteristic.—H. W. Pugsley.

Hieracium ———. Bexley Hill, W. Sussex, Aug. 15, 1929.—R. J. Burdon. *H. scabrescens* Dahlst., I think. I should not regard this as a variety of *H. rigidum* Hartm.—H. W. Pugsley.

Lactuca Serriola Linn. Adventive by the Docks, Avonmouth, West Gloucester, Sept., 5, 1929.—Jas. W. White. It can readily be separated from *L. virosa*, its nearest ally, by the narrow achenes.—J. Fraser.

Jasione montana Linn. var. *latifolia* Pugsley. Coast west of Porlock Weir, Somerset, v.c. 5, July 11, 1929.—E. C. Wallace. This appears to belong to the variety, but it is not well-marked and the heads are unusually small.—H. W. Pugsley.

Erica mediterranea Linn. Mountain bog near Roundstone, Connemara, West Galway, April 5, 1895. Coll. R. L. Praeger. Comm. S.L.B.I. In spite of its name this species is not found in the Mediterranean district.—H. S. T.

Erica cinerea L., var. *Rendlei* L. B. Hall. Parkstone, Dorset. Aug. 26, 1929. L. B. Hall. See *Journ. Bot.* 1909, p. 437, and 1928 p. 25, Druce's *British Plant List*, No. 1694 E. All the specimens labelled Parkstone, now and previously distributed were gathered from the same bush (ref. No. 703) at different times. Each year since it was first discovered this plant has borne only the heads of crimson bracts in place of flowers, as also have the several other plants of this form which I have had under observation in Dorset during the last few

years.—L. B. Hall. A very interesting freak or chimaera.—J. Fraser. This was rightly treated by Dr. Rendle as a *lusus*, and he did not give it a name. Surely such *lusus* or *terata* should not be given varietal names.—Eric Drabble. This is a teratological state and not a taxonomic variety.—H. W. Pugsley. Mr. Pugsley points out that the second *Journ. Bot.* reference on the label should be 1928, p. 25, not 272 as typewritten by Mr. Hall.

Pyrola rotundifolia L. var. *maritima* (Kenyon). Sand dunes, Ainsdale, S. Lancs., v.c. 59. Coll. J. Davy Dean, 1928. Comm. Dept. of Botany, National Museum of Wales.

Primula elatior Jacq. Near Saffron Walden, North Essex. April 21, 1901. Coll. A. O. Hume. Comm. S. Lond. Bot. Inst.—The broad, oval leaves, suddenly contracted into the petiole, are good evidence. I cannot see inside the corolla to see the open throat, nor is there a ripe capsule to show the seed-vessel projecting from the throat.—J. Fraser.

Erythraea Centaurium Pers. *floribus albis*. Ashcott Peat moor, Somerset, v.c. 6, in considerable quantity, July 20, 1929. —H. S. Thompson. Stamens from top of tube. Yes, a pretty form which probably comes true from seed.—C. E. Salmon.

Gentiana campestris L. var. *baltica* (Murb.) [837]. Annual. Foulden Common, Norfolk, 13 Sept., 1927.—J. E. Little. Ascherson & Graebner (Fl. n. o. deutsch. Flachl. 562) remark that the annual plant alone is found over the North-German plain, and that the biennial is limited to the mountains and to Scandinavia. The census numbers for Britain require re-adjustment. For how many vice-counties is the biennial recorded ?—J. E. Little.

Solanum Dulcamara L. var. *tomentosum* Koch.=*S. littorale* Raab. Among bushes on Clifton Down, Bristol, West Gloucester, July 15, 1929. A first record for the Bristol area. —Jas. W. White. . . . Mr. White's plant seems to me to be the extreme form in hairiness, being tomentose.—J. Fraser.

Linaria repens Mill. Lodsworth Common, W. Sussex, Aug. 15, 1929.—R. J. Burdon.

Veronica hybrida Linn. Gloddaeth Hill, Llandudno, Carnarvonshire, July 13, 1905. Coll. A. O. Hume. Comm. S. Lond. Bot. Inst.

Euphrasia———. Meadow near Dolygaer, Breconshire. v.c. 42, June 19, 1929. Coll. A. E. Wade. Comm. Dept. of Botany, National Museum of Wales. *E. borealis*. Quite eglandular, almost perfectly glabrous, with smooth and shining surfaces to the foliage. The larger leaf measured 13 × 11mm. The flowers are yellow.—W. H. Pearsall. *E. borealis*. The flowers in my specimens show no signs of having been yellow.—E. Drabble. A fine set of *E. borealis* Towns., but one plant of *E. Rostkoviana* Hayne included on one sheet.—H. W. Pugsley.

Euphrasia brevipila Burnat and Gremli. Pasture, Wiseman's Bridge, Saundersfoot, Pembrokes., v.c. 45, July 2, 1929.—Ida M. Roper. Correct.—H. W. Pugsley. Yes, *brevipila*.—E. Drabble. *E. brevipila*, glandular hairs very numerous and very short on the foliage, longer on the stem.—W. H. Pearsall.

Euphrasia brevipila Burnat and Gremli. Both sides of Durston's drove, Ashcott peatmoor, Somerset, July, 20, 1929, On the E. (sunny) side the plants and flowers were smaller, and rather burnt up. On the W. side, shielded by bracken, it was less affected by drought.—H. S. Thompson. Yes, *brevipila*, with short glandular hairs on the leaf.—E. Drabble. *E. brevipila*, glandular hairs short on foliage—but not so short as on Miss Roper's plants—and very long on the stem.—W. H. Pearsall. Yes, plants not very glandular.—H. W. Pugsley.

Euphrasia brevipila Burnat and Gremli, var. *notata* Pugsl. ined.—(No. 451), Slopes below Ben Lawers, Perthshire, 6 Aug., 1929. This handsome eyebright, which is remarkably abundant about Lawers, was described by Townsend in Journ. Bot. XXXV. 473 (1897) as *E. Rostkoviana* × *brevipila* (*E. notata* Towns.). In the Club's Report for 1902—3 the same determination was again given for specimens collected at Lawers. The suggested hybrid parentage cannot be accepted as there is apparently no evidence of *E. Rostkoviana* occurring in the Scottish highlands.—H. W. Pugsley. The glandular hairs are very long and the corolla tube seems to lengthen. Are these characters of var. *notata* ?—E. Drabble.

Euphrasia———. [802]. Speymouth, Morayshire, Sept. 9, 1929.—Leg. K. D. Little, Comm. J. E. Little. *E. brevipila*. —E. Drabble. *E. brevipila*. Variable plants as regards their clothing, most of them possess glandular hairs of variable lengths scanty or absent on the stems. One simple plant has short glandular hairs only, and none on the stem. A very small plant is nearly eglandular, only four or five glandular

hairs having been seen. The main stem has been grazed in four of my six plants.—W. H. Pearsall. A mixture of glabrous, hairy and glandular plants, all nibbled. Probably hybrids of *E. brevipila* and *E. curta*.—H. W. Pugsley.

Euphrasia———. [809]. Covesea, Morayshire, Sept., 1929.—Leg. K. D. Little. Comm. J. E. Little. Some of these specimens are hirsute and glandular, others hirsute only. I think they are of hybrid origin, *E. brevipila* × *curta*. —H. W. Pugsley.

Euphrasia———. [1292]. Foot of Buckland Hills, Surrey, Aug. 5, 1929.—E. C. Wallace. Rather unusual *E. nemorosa*. Foliage glabrous, with smooth and polished surfaces and remarkably plicate below; teeth very long and acute.—W. H. Pearsall. Stout, dwarf *E. nemorosa* var. *ciliata*.—E. Drabble. A form of *E. nemorosa* Löhr.—H. W. Pugsley.

Euphrasia latifolia Pursh ex Wettst. (No. 458). Cam Creag, Perthshire, July 29, 1929, and (No. 460), Craig-na-lochan, Perthshire, Aug. 1, 1929. These examples agree with Scandinavian material of *E. latifolia* and are allied to *E. foulaensis* Towns. The Cam Creag specimens are too young to show well the characteristic large, deeply notched capsules, but a fruiting plant has been included on each sheet. The distribution of the Eyebrights on the north side of Loch Tay is interesting. On the lower mountain slopes a conspicuous, white-flowered variety of *E. brevipila* is abundant, and especially where the ground is heathery, *E. micrantha* Rchb. (= *E. gracilis* Fr.) also occurs. In the bogs up to about 2000′ altitude *E. scotica* is generally plentiful, and on reaching the higher rocks, one meets with *E. latifolia*, which ascends nearly to the summit of Ben Lawers. As might be expected, *E. latifolia* is a late-flowering species in Scotland.—H. W. Pugsley. Yes, *E. latifolia*, eglandular and with very scanty clothing of any sort.—W. H. Pearsall.

Euphrasia anglica Pugsl. (No. 462). Box Hill, Surrey, Sept. 15, 1928. This is the plant of which a preliminary diagnosis has been printed in Journ. Bot. LXVII, 225 (1929). The material distributed is not entirely satisfactory owing to the dry season, but each sheet has been made as representative as possible.—H. W. Pugsley.

Euphrasia——— [831]. Ebernoe, W. Sussex, Aug. 25, 1929. —J. E. Little. Starved *E. anglica* Pugsl.—H. W. Puglsey.

Euphrasia———. [1293]. By stream in Horner Wood, near Porlock, W. Somerset, v.c. 5, July 16, 1929—E. C. Wallace. (See below.)

Euphrasia———. [1294]. Under bracken, in Horner Wood, growing near [1293], Porlock, W. Somerset, July 16, 1929.—E. C. Wallace. I expect your two sheets (1293 and 1294) will be referred to *E. anglica*, . . . but we must 'wait and see' what its distinctive characters really are.—W. H. Pearsall. I think Mr. Pugsley will call both of these *E. anglica*, but I leave the naming to him.—E. Drabble. Both *E. anglica* var. *gracilescens* Pugsley. Identical with the form collected by Mr. Barton at Whortleberry Cleave, Lynmouth, in 1917, and then referred to *E. fennica* Kihlm.—H. W. Pugsley.

Bartsia Odontites L. var. *littoralis* Reichb. Salt marsh, South of Brodick, Arran. Coll. R. Mackechnie, Aug. 8, 1929. Comm. C. E. Salmon. Reichenbach (Fl. Germ. et Helv. XX, p. 58 and t. 106, MDCCXXVII, II ; 1861) described this as follows: "*B. Odontites* Huds. *β. littoralis*. Simplex, calyce fructum dimidium vix superante. *E. littoralis* Fr. Sum. Veg. 196. Character etiam non perstat." Reichenbach had not, evidently, a high opinion of this plant as a good variety. Fries, however, stated that it was constantly distinct by its simple stem or with few strictly erect branches, erect raceme, leaves broader and shorter and fleshy, bracts shorter than the flowers, and exserted capsule.

I fear Mr. Mackechnie's specimens cannot come under this, as I fail to find any fruits answering to Reichenbach's diagnosis or agreeing with his figure.—C. E. Salmon.

Rhinanthus minor Ehrh. Rough meadow between Trelonny and Grondra, Mon., v.c. 35. Coll. W. A. Shoolbred, June 6, 1905. Comm. Dept. of Botany, National Museum of Wales. Yes, I think good *minor* Ehrh.—C. E. Salmon.

Orobanche elatior Sutt. [790]. Barley, nr. Royston, Herts., July 8, 1929. Coll. May Wilson. Comm. J. E. Little.—The right plant, but gathered rather early for the spacing of the flowers. I believe it is confined to the roots of *Centaurea Scabiosa*.—J. Fraser.

Mentha cordifolia (Opiz) Fraser, f. *angustifolia* Fraser. Cult. Kew, Surrey, August 16, 1928. The above form originated as a vegetative sport in our garden, in 1922, from a root of × *M. cordifolia*, sent me from Swanage in 1914. The parent-

age of the hybrid is *M. rotundifolia* × *spicata*, and the sport has reverted to the latter in the form of the leaves, but their hairiness and rugosity come from *M. rotundifolia*.—J. Fraser. Acceptable specimens of a plant that is rarely produced. Mr. Fraser will probably agree that his form *angustifolia* represents a state of the hybrid that strongly favours *M. viridis*, while the parentage of *rotundifolia* is but faintly evident.—Jas. W. White.

Mentha alopecuroides Hull. Roadside near Felday (an extreme verge of Hurt Wood), Abinger, Surrey, Sept. 20, 1929.—E. C. Wallace. Correctly named for Hull. Briquet believes that this is one of a series of hybrids between *M. longifolia* and *M. rotundifolia*, not necessarily a primary hybrid but this crossed again with a parent or a hybrid. It has become naturalised in many parts of Surrey. Its very strong rhizomes enable it to do this.—J. Fraser.

Mentha longifolia Huds. [2]. Outcast in dry pasture, Woodcote Park, Epsom, Surrey, Aug. 7, 1929.—E. C. Wallace and M. Bell. The specimens sent me are all uniformly the same thing and correctly named. The stamens are exserted as in all true species,though most of the anthers have dropped. The leaves are netted after being dried. I have a similar one from Gomshall, Surrey.—J. Fraser.

Mentha longifolia × *viridis*. Border of garden ground, Malone Road, Belfast, Co. Antrim, Aug. 2, 1927. Poor specimens compared with those gathered in an earlier year, the lower leaves having perished through drought.—Jas. W. White. Yes ; identical with those collected in 1926, but shorter stems, less branched and the inflorescence more condensed, but ten days younger. These differences may be due to a drier season, or the plants may have crept into a harder soil, and that would mean a drier one. Mints are profoundly modified by their surroundings and the rainfall.—J. Fraser.

Mentha aquatica Linn. (1295). Roadside ditch on Blindley Heath, Surrey, Aug. 7, 1929. Very strongly scented when fresh. —E. C. Wallace. The leaves of this are long, narrowed to both ends, and thinly hairy as *M. aquatica* Linn. var. *major* Sole usually is. There are colonies occasionally with densely hairy leaves in dry situations. This Mint can be sometimes three to five feet high. The specimens are all the same variety, which varies a little in form, according to soil and rainfall. —J. Fraser.

Mentha citrata Ehrh. Marshy roadside, Priddy on Mendip, North Somerset, Sept. 19, 1929. I have been asked to say how my *Mentha citrata* is to be distinguished from forms of *M. piperita* such as *M. vulgaris* Sole or the var. *subcordata* Fraser. Simple questions like that, involving similar problems, have been repeatedly discussed since Ehrhart described his plant in 1792, and were never easily disposed of. My view of this Mendip plant is that it agrees not only with Ehrhart's original description but with that supplemented later by French and other authors. It differs from *M. piperita* by its sweet scent, not greatly mint-like but recalling the odour of citron or bergamot ; by its low stature and branching habit—the branches spreading widely although not equalling the main stem ; and by its short, blunt, oblong inflorescence. If it be objected that *M. citrata* was described as glabrous while these specimens carry a few scattered hairs, the reply is that both *M. odorata* Sole and *M. adspersa* Mch. with " foliis glabrioribus " and " tiges presque glabres " are accepted as synonymous with *M. citrata* ; and that M. Ernest Malinvaud (*Bulletin de la Société Botanique de France*, tome XXVII, p. 51, where these matters are treated at length) says " Il est vrai que les jeunes tiges de *M. citrata* présentent souvent quelques poils clairsemés, qui disparaissent sur la plante adulte."—Jas. W. White. These are very fine specimens, which have had all the benefit of direct sunlight, good soil and a sufficiency of moisture ; but I cannot see *M. citrata* in them. The inflorescence is always a spike, through a short one, as in all the varieties more allied to *M. vulgaris* Sole than to *M. piperita* Linn. Some of the larger leaves of the main axis measure 5·7 × 2·7—3 cm. My specimens of *M. citrata* have a small capitate inflorescence ; and the leaves measure 4·2-8·3 × 3·5-5·5 cm., so they are broader in proportion to their length than the Priddy specimens, which I call *M. piperita* L. var. *subcordata*.—J. Fraser. Surely this is best treated as a variety of the species or hybrid *M. piperita* L. Mr. White, in Fl. Bristol, p. 468, has some interesting remarks on its behaviour under cultivation. —H. W. Pugsley.

Mentha sativa L. Wet roadside, Poulner, near Ringwood, S. Hampshire, Aug. 1, 1929. I should much value a more exact determination.—I. A. Williams. A form of the very polymorphic *M. sativa* L. var. *paludosa* (Sole). The leaves are the most constant part of the plant, being narrowed to both ends, but most tapered to the apex. The inflorescence is

seldom subspicate as in Sole's Plate 22, but in this case the stems often end in a verticil of flowers. The plants have been densely crowded, or growing amongst rank vegetation that has drawn up the stems long and slender.—J. Fraser.

× *Mentha verticillata* Linn. [A. 72]. Great Bookham Common, Surrey, Sept. 9, 1929.—J. E. Lousley. This variety is × *M. verticillata* Linn. var. *paludosa* (Sole), but it is abnormal, if this polymorphic hybrid can be called abnormal. The stems are slender and, like the leaves, very thinly hairy, indicating that the plants have been shaded by rank vegetation or other surroundings. The leaves are of the right shape, and the calyx and pedicels normally very hairy. The inflorescence rarely approaches the subspicate state, but even the best subspicate forms give scattered verticils when taken into the garden.—J. Fraser.

Mentha aquatica × *arvensis* var. *paludosa* (Sole). [793]. Linch, W. Sussex, Aug. 14, 1929.—R. J. Burdon and J. E. Little. Correctly named. The inflorescence is not so subspicate as that of Sole's plate of it ; but it very seldom is. The lower part of the stem is often thinly hairy in this gathering, and the lower leaves small, showing that the plants have been growing amongst rank vegetation. The slender point of the calyx teeth is longer than usual for this variety. It is a very polymorphic hybrid. My best specimen has twelve spikes on the stem and branches, whereas Sole's Pl. 22 shows only one good spike and one small verticil at the end of each of two very short branches.—J. Fraser.

× *Mentha verticillata* Linn. var. *paludosa* (Sole). Baron's Pond, Epsom Common, Surrey, Aug. 29, 1929.—E. C. Wallace. Correctly named, though very abnormal, and some profoundly modified by the dry season. The leaves are much smaller than usual and less hairy ; while the stems are very thin. The calyx usually has short teeth, with a broad triangular base, and acuminate point. It is a very polymorphic Mint. I saw it at Baron's Pond last September when the pond was dry for the first time in my experience.—J. Fraser. Baron's Pond was almost dry in 1921.—E. C. Wal-Wallace.

× *Mentha verticillata* Linn. var. *acutifolia* (Sm.) f. *albiflora*. Cult. Kew, from the R. Medway, W. Kent, v. c. 16, Aug. 14, 1926. Except for its white flowers this comes very close to Smith's type *M. acutifolia*. Cultivation widens the leaves to some extent.—J. Fraser.

× *Mentha rubra* Sm. By stream on Nutfield Marsh, Surrey, Aug. 31, 1929.—E. C. Wallace. The underside of the leaves of this are pilose on the principal nerves, the petioles are hairy, and the stem is shortly pubescent with a few scattered longer hairs, most plentiful at the nodes. The bracts are ovate, acute or shortly acuminate. These characters make the plant × *M. rubra* Sm. var. *raripila* Briq. I am puzzled to know how Mr. Wallace has been able to find so many specimens of this pilose variety, seeing that I noted only the typical subglabrous plant at Nutfield Marsh at the beginning of this century, and as recently as 1916.—J. Fraser.

× *Mentha rubra* Sm. [1296]. Brook, near Albury, Surrey, Sept. 7, 1929.—E. C. Wallace. These are × *M. rubra* Sm. var. *raripila* Briq. The leaves on both sides, the petioles, stems and bracts are more hairy than those from Nutfield Marsh. Occasionally the lower part of the stems are quite hirsute. The hairs are most numerous on all parts near the base of the plants and diminish upwards, contrary to this in most or all other Mints, which become more and more hairy as they grow up from the source of moisture. My specimens from Brook are the subglabrous type.—J. Fraser.

Mentha cardiaca Baker. Orig. Ripley, Surrey. Hort. Reigate. Aug. 22, 1929.—C. E. Salmon. Agrees well with Baker's description and plate in Journ. Bot. 1865, p. 245.—C. E. Salmon. Correctly named, even though I am a disciple of John Briquet, and name it × *M. gentilis* L. var. *cardiaca* (Baker) Briq. I collected it near Ripley in 1901.—J. Fraser.

Mentha arvensis L. Wet roadside, Poulner, near Ringwood, S. Hampshire. Aug. 1, 1929.—I. A. Williams. For favour of more exact determination. The two gatherings from this locality were from two adjacent, but distinct, patches, growing among other lush wet vegetation. I much regret that, owing to an accident some of the specimens have been broken.—I. A. Williams. Correctly named. Very tall plants for this species, and they must have been growing amongst rank vegetation. The pedicels are glabrous, which is right for the type of Linnaeus.—J. Fraser.

Galeopsis Tetrahit var. *nigricans* Bréb. Gomshall, Surrey, Aug. 1929 ; Flowers white. This is fairly common in Surrey, but may be of interest to some of the members.—W. Biddis-

combe. See Journ. Bot., 1928, p 44.—E. C. W. There is some blackish purple anthocyan in the stem and calyces, so it may be called *nigricans*, which however, is merely a colour condition. On leaf characters my sheet comes under var. *arvensis* Schlecht. with which "variety" alone have I seen the "*nigricans*" condition associated. E. Drabble.

Galeopsis Tetrahit Linn. Lurgashall, West Sussex, Aug. 19, 1929.—R. J. Burdon. Yes, the typical form of the species. —J. Fraser. This also I should put under var. *arvensis* Schlechtendal. I think *arvensis* and *sylvestris* grade into one another.—E. Drabble.

Lamium purpureum L. *fl. albis*. White Hill, Hitchin, Herts; May 8, 1928.—J. E. Little.

Lamium hybridum Vill. (entomophilous state) [769] Market Garden, Riddy Lane, Hitchin, Herts, May and June, 1929.— J. E. Little.

Teucrium Scorodonia Linn. var. nov. *acrotomum* L. B. Hall. Origin Exmoor, Somerset, 1922. L. B. H. Grown in garden, Parkstone, Dorset. Gathered Aug. 17, 1926. See Journal of Botany, Oct, 1928. I have now grown this variety in my garden for seven years, under various conditions, and it remains constant in the essential characters which distinguish it from type. The specimens I now send were grown in very light and poor sandy soil.—L. B. Hall.

Ajuga Chamaepitys Schreb. Over-winter plants, in sainfoin, near Tingley Wood, Herts. June and July, 1929. [783]—J. E. Little. The sainfoin was being fed off by sheep in pens. They were clearing off down to the bone everything except docks. These plants are the best developed I have ever seen.—J. E. Little. Yes, I have not seen such splendid specimens from cultivated ground before, but it grows as fine on a rough hillside near Chipstead in Surrey.—E. C. Wallace.

Chenopodium glaucum Linn. Waste ground, Splott, Cardiff, Glam. v.c. 41. Coll. A. E. Wade. Aug. 24, 1928. Comm. Department of Botany, National Museum of Wales. Yes, *glaucum*.—E. Drabble.

Axyris amarantoides. L. Waste ground, Splott, Cardiff, Glamorgan. R. L. Smith. Aug., 1929. Comm. Nat. Mus. of Wales. A neat and interesting casual member of the Chenopodiaceae, which has no very close relationship with any British species of the family.—J. Fraser. A mid- and north Asiatic genus.—Ed.

Polygonum dumetorum Linn. Most luxuriant in a copse near Henley Park, near Normandy, Surrey, Sept. 1, 1929.—E. C. Wallace. A good find. In my experience it does not appear a second year in the same spot, though it fruits abundantly.—J. Fraser. Excellent fruiting *dumetorum*.—E. Drabble.

Polygonum dumetorum L. [No. 463]. Wimbledon Wood, Surrey, Sept. 21, 1929. This plant was distributed from this station in 1924, but a few later specimens may be acceptable. The habitat is now being destroyed by building.—H. W. Pugsley.

Polygonum minus Huds. [A.71.] Dried up pond on Weston Green, Thames Ditton, Surrey. August 17, 1929.—J. E. Lousley.

Polygonum mite Hook. (P. *laxiflorum* Weihe. [A. 68]. Very damp ground by Thames, near Teddington, Surrey. Sept. 7, 1929.—J. E. Lousley. Yes, *P. mite*, according to seed characters.—E. C. Wallace. I agree, the leaves, stipules and sepals are right.—J. Fraser. Yes ; fruits $2\frac{1}{2}$ mm. in length, much larger than those of P. *minus* var. *elatum*.—E. Drabble.

Polygonum petecticale Stokes. Pond near Guildford, Surrey. Aug. 25, 1929.—R. J. Burdon. Yes, I gathered this plant a week later at Briton's Pond. See Report, Vol II, page 553.—E.C. Wallace.

Polygonum Persicaria Linn. (A.70) Moist ground near Thames, Bourne End, near Cookham, Bucks. Aug. 25, 1929. Ocrea close, fringed. Perianth smooth. Perhaps var. *elatum* Gren. et Godr. I should place this under the var. *biforme* (Wahlenb.) Fries. (= var. *elatum* G. & G.) although it is not very typical.—A. E. Wade.

Polygonum lapathifolium Linn. [A.69]. Waste ground by Teddington Lock, Surrey, Sept. 9, 1929.—J. E. Lousley. P. *lapathifolium* var. *viride* forma *latifolium* Asch. and Graebn. —A. E. Wade. The material is young, but by a couple of fruits, which are small, and concave, I should say this is rather *P. maculatum* (Trim. and Dyer) Bab. (*P. nodosum* auct.) But there is, as sometimes occurs in this plant, an absence or at least great scarcity of glands upon the stalks. In *P. lapathifolium* the racemes are obtuse-tipped ; in the present plant they are tapered upwards, and the flowers have a rosy tinge, instead of the (usually) white turning green of *P. lapathifolium*.

(See note in B. E. C. R. 1927, 586. Dr. Druce insists now on *P. petecticale* (Stokes), Dr. Rice *P. maculatum*. Ascherson and Graebner take up *P. nodosum* Pers.).—J. E. Little.

Rumex rupestris Le Gall. Packets of fruits. Perranporth, W. Cornwall. Aug. 7, 1929.—F. Rilstone. Comm. J. E. Little.

Rumex crispus var. *trigranulatus* Syme. [835]. Fruits. Bank of R. Wissey, W. Norfolk, Sept. 10, 1927—J. E. Little.

Euphorbia Paralias Linn. Shingly coast near Dunster, Somerset, July 18th, 1929. Very abundant over a limited area.—E. C. Wallace.

Ulmus stricta Lindley (Fruits). Polperro, East Cornwall, April 1929. The Cornish Elm (*U. stricta*) usually flowers freely but produces very little fruit. This year however the trees fruited abundantly. The fruits sent were collected after they had fallen from the trees. F. Rilstone. The fruits are better than I have been able to get in Surrey.—J. Fraser.

Salix alba × *fragilis* ♀ [744]. Planted, Stevenage Tennis Club, Stevenage, Herts, June 20, 1928, June 26, 1929.—J. E. Little "[744]. *S. alba* × *fragilis*, f. *excelsior* s.f. *discolor* Kerner, s.s.f. *angustifolia Meyer.*" R. Görz, in litt. 7.ix.29. Correctly named. The pedicels are rather short. The base of the ovary is broad. and the apex ends rather abruptly at the style, which are right for the hybrid. The leaves are unusually narrow, but the tree may not be growing vigorously, or the *S. alba* parent may have been the narrow leaved one. They are also thinly hairy in the case of the younger ones, but they get glabrous by August or September. The serratures are intermediate between the parents.—J. Fraser.

Salix pruinosa Wendl. [Ref. No. 477]. Cult. Kew, Surrey. Not a British species but often cultivated for ornament, and early flowering. The buds sometimes burst in November if the weather is mild, but do not get into full bloom till February or March. The special feature of the group to which it belongs is the white covering of wax on the bark, as if frosted.—J. Fraser.

Salix aurita × *caprea* (*capreola* J. Kern.). [Ref. No. 442]. Merstham chalk pits, Surrey, catkins March 27, leaves June 12, 1927. The features of the hybrid are the small, rather

finely serrate leaves, and the slender twiggy, branching growth. The base of the bracts of the catkin below the black tip, is ferruginous.—J. Fraser.

Salix caprea L. ♀ (Det. J. Fraser). [833]. Longmorn, Morayshire, June 19, 1928.—Leg. K. D. Little. Comm. J. E. Little. The gathering has been collected rather too early to show the large, wavy crenatures, characteristic of this species. The primordial leaves of this species are mostly entire, and only some of the longer summer shoots show the crenatures on the uppermost developing leaves. There are no striae or raised lines on the wood under the bark of this species, as the pieces of shoot from which the bark is removed will show. Striae or their absence are valuable in the determination of hybrids in this group.—J. Fraser.

Juncus tenuis Willd. Abundant on stone paving by farm house, Rosemorran, near Gulval, W. Cornwall, Aug. 5, 1929 (later specimens received Aug. 30,). A new locality for this plant, still rare in Cornwall. H. S. Thompson. It was rather rare in Surrey before the war, but since much of the timber was cut down this *Juncus* appeared on several of the Commons and along the canal banks.—J. Fraser.

Juncus inflexus Linn (*glaucus* Ehrh.) [A. 15]. Littleworth Common, Esher, Surrey. August 31, 1929. J. E. Lousley. Sent for comparison with *diffusus*.—Yes ; J. E. Little.

× *Juncus diffusus* Hoppe (*effusus* × *inflexus*). [A. 18]. Growing with *inflexus* at Littleworth Common, Esher, Surrey, Aug. 31, 1929. *Inflexus* from the same locality is sent for comparison. Although there was no time to search for it, I have no doubt that *effusus* occurs in the near neighbourhood. These specimens have the continuous pith, very small capsules, and the dark sheaths said to be characteristic of the hybrid.—J. E. Lousley. I see nothing characteristic in the sheath colouring of these plants, but agree that they are the sterile form of the hybrid.—E. C. Wallace. Yes—J. E. Little. I regard the specimen as all there is to represent the hybrid. The chief distinction between it and *inflexus* is the very much smaller capsule. *J. inflexus* Linn., sent with it, was quite correct. *J. effusus* Linn. is the most common species of this group in Surrey, and varies with loose panicles, and compact heads.—J. Fraser.

Juncus maritimus Lam. var. *congestus* L. B. Hall. Near Poole Harbour, Dorset, Oct. 2, 1928 and Aug. 27, 1929.

See Journal of Botany, 1928, 361. The original five large clumps, which I first found in 1927, have this year, 1929, again produced only heads of the compacted form as in the two preceding years. An extended search among the large colonies of the type which occur in the district has hitherto failed to reveal any other plants of this form. With each specimen I have included heads from type plants which were growing in contact with the variety.—L. B. Hall. Mr. Hall sends fruiting spikes of his variety with those of the normal species. The comparison suggests that the variety may be a hybrid with *J. effusus* or *J. conglomeratus*, the flowers being smaller than those of the type and the capsules very irregularly developed. The seeds, too, are smaller and of a different colour, and it would be interesting to test their fertility. A comparison of rootstocks might furnish some further evidence if the form is of hybrid origin.—H. W. Pugsley.

Sparganium ramosum Huds. subsp. *neglectum* (Beeby). Asch. and Graebn. [818]. Sept. 25, 1929, Purwell, Hitchin, Herts.—J. E. Little. [823] Ippolyts Brook, Hitchin, Herts, Oct. 3, 1929.—J. E. Little. [818] Is from an old mill-head, stagnant water and deep alluvium. The stem and leaf bases are red-brown. [823] Is from the same brook a little higher up, in running water. The stem-bases are white. There seems no reason to separate the two upon this colour difference. Upon the fruits they all appear to come under *neglectum*. The subspecies *polyedrum* Asch. and Graebn. does not occur in this district.—J. E. Little. [818] Yes ; this is certainly Beeby's plant.—J. Fraser.

Potamogeton alpinus Balb. Abundant in ditch near Newark Mill, Ripley, Surrey, Aug. 25, 1929. Fruiting specimens rather scarce, as in the case of *P. acutifolius* from another part of the same ditch.—E. C. Wallace. I consider this correct.—J. Fraser. Good examples of normal *P. alpinus* showing the obovate coriaceous floating-leaves with petioles always shorter than the lamina which is gradually narrowed to the base. In deep water these floating-leaves are very seldom produced and, as a result, students then experience some difficulty in identifying the species. The submerged leaves are obtuse, lanceolate, sessile and usually tinged with red. They vary much in width—from 7–35 mm—and in length may reach even 15 cm.—W. H. Pearsall. The ditch was rather deep, and as these plants were growing up amongst

Hottonia and *Elodea*, some had no floating leaves but had long submerged ones.—E. C. Wallace. An interesting contribution from Surrey.—H. W. Pugsley.

Potamogeton acutifolius Link. Ditch near Newark Mill, Surrey, Aug, 25, 1929.—E. C. Wallace. Yes; fruiting spike with short peduncle and most characteristic fruits. Very acceptable.—W. H. Pearsall. There are no fruits to this, but the winged, leafy stems and the acute leaves with numerous veins, the middle one being much the strongest, are quite the characters of the species.—J. Fraser.

Potamogeton obtusifolius Mert. and Koch. Hedge Court Mill pond, Surrey, Aug. 17, 1929.—E. C. Wallace. Answers the description and illustration. The linear leaves are obtuse or very shortly mucronate, and three to five nerved, the middle nerve much the strongest.—J. Fraser. Fine specimens of *P. obtusifolius*, showing well-developed fruiting spikes. This species produces fruits very freely, and those sent in, show the so-called " 3 keels " very plainly—the main one having two subsidiary ones parallel to it. The leaves are 3 nerved—the usual form—but 5 nerves are by no means uncommon, although Syme (*Eng. Bot.*) says he has never seen such. Koch gives 3-5 veined. When sending the late Mr. A. Bennett the plants from which Pl. 52 of *British Pondweeds* was drawn, I also enclosed plants from the neighbouring Colthouse Heights, with 5-veined leaves, and I have similar specimens from other localities. Leaves possessing even 7 nerves—as figured by Fieber—have been seen from Arctic America. The 5-veined leaves are very commonly mistaken for those of *P. Friesii*, but the habit of that species is quite different. Hagström (*Crit. Res.* p. 116) says " the midrib and lateral nerves grow very faint and join in the very apex." They join well below the actual tip in British specimens, and the lateral nerves usually form a sharp curve before doing so.—W. H. Pearsall.

Scirpus maritimus Linn. var. *macrostachys* Willd. From a large solitary clump by a dyke on Higham Marshes, W. Kent, Oct. 5, 1929.—E. C. Wallace. Yes, very good *macrostachys*.—E. Drabble. This seems to me to be right.—J. Fraser. This appears correctly named, but the authority for the variety should be Visiani, Fl. Dalmatica, 1, p. 109.—H. W. Pugsley. The extreme variability of the inflorescence of *S. maritimus* on the shores of the Bristol Channel, its tidal

rivers and neighbouring marshes, " brick-ponds " and other pools has been known for many years. Rightly they are called " states " by Mr. White, who says (Flora of Bristol, p. 616): " Every connecting link can be traced through this remarkable series of variations, which are difficult to account for." One has seen the same thing in Essex, Yorks., and Cornwall, and doubtless it occurs in many places. It was actually not until 1901 that A. O. Hume drew attention to English specimens of the depauperate form known as var. *monostachys* Sonder (Journ. Bot. 1901, 145), and he also pointed out the difficulty in accounting for the various named forms or states growing side by side or in comparative proximity.—H. S. Thompson.

Carex paniculata Linn. [1298]. Garden weed, Sutton, Surrey. May and July, 1929. Origin unknown. It first appeared in 1927, since when the seedling plant found has become a large clump.—E. C. Wallace. This appears to be a weak form, probably caused by unusual situation and lack of moisture, of C. *paniculata* L. The scarious glumes etc., all point to this species. The fruits are rather smaller than usual and are not quite ripe on my example; they are thus less veined than when mature.—C. E. Salmon. This matches plants named for me by C. E. Salmon as *pseudo-paradoxa*, and by G. C. Druce as f. *compacta*. It is intermediate between the more decompound panicle of the type and the much reduced branching of f. *simplex*.—J. E. Little. *C. paniculata* f. *simplicior* Anders.—Ida. M. Roper. This appears to be only a weak state of the species growing under unnatural conditions.—H. W. Pugsley. The most striking feature is the shortness of the branches of the panicle.—The leaves are also narrow, so that the specimens may be due to the very dry conditions in a garden, and the long drought of last year.—J. Fraser. Such weak forms are often found even under normal conditions in marshes and peat bogs. Although the specimens sent me are very near Mr. Little's *pseudo-paradoxa* (*fide* C. E. Salmon) are they not better left merely as var. *simplicior* Anderss ?.—H. S. Thompson.

Carex limosa Linn. [A. 17]. In the most spongy parts of Holmsley Bog, New Forest, Hants., Aug. 11, 1929.—J. E. Lousley. Correct. Usually a very muddy plant, and parts of Holmsley Bog are certainly muddy. The species may be recognised by the one to three, drooping female spikes, the

oval, glaucous perigynium, the very short beak, and by the woolly hairs on the root fibres, where they have been washed clean.—J. Fraser.

Carex strigosa Huds. Damp wayside between Cleeve and Yatton, North Somerset, June 9, 1929.—J. W. White.

Carex Œderi Retz. var. *œdocarpa* Anderss. Ashcott peat-moor, near N. end of Durston's drove, Somerset, July 20, 1929. Abundant and variable.—H. S. Thompson. Correct. The plant is taller than *C. Œderi* usually is, with a curved stem and more scattered spikes, the male being stalked. The fruit also has a longer beak.—J. Fraser.

Alopecurus myosuroides Huds. Fruits. Purwell Field, Hitchin, Herts., Aug. 4, 1928.—J. E. Little.

Agrostis setacea Curt. Selworthy Beacon, W. Somerset, July 8, 1929.—E. C. Wallace.

Agrostis tenuis Sibth. [A. 74]. In *very* wet copse in midst of Holmsley Bog, New Forest, Hants., Aug. 11, 1929. I can only suggest that this is a pale, tall, lax form of *Agrostis tenuis*, though the general appearance and habitat seem strange —J. E. Lousley. I agree. The specimens are very slender and attentuated owing to their being in shade. The ligule is short and truncate. The barren glumes are nearly equal, and one of them is setulose on the upper half of the keel. The rachis of the inflorescence is very finely and thinly hispid.—J. Fraser. Yes, evidently a weak form.—W. O. Howarth. I think a shade form of this.—H. W. Puglsey.

Agrostis sp. Field and roadside, Freshwater Bay, I. of Wight, VII, 1927 and VIII, 1929. Sent to elicit opinions. A commoner plant hereabouts than ordinary *A. alba*, from which it differs in often having a larger panicle, always brownish-purple, never whitish, the main branches remaining spreading, though the secondary often close up at maturity. It does not quite agree with *A. nigra*, With., as described by Bagnall (Journ. Bot. XX. p. 65, 1882), though much like his illustration. Of a similar plant collected here Mr. Sherrin has suggested that it comes near *A. alba* v. *gigantea*, f. *silvatica*, but our plant is not a shade form. J. Groves. I fail to separate this from *Agrostis alba* Linn. var. *stolonifera* (Linn). The large, much branched panicle is right, with pale violaceous barren glumes, that are nearly equal, with a setulose keel. The flowering glume is twice as long as its pale, and is furnished with a short, colourless awn under its

apex. The plant is stoloniferous and grows 12-36 in. high.—J. Fraser. This plant is *Agrostis alba* var. *gigantea* subvar. *silvatica* Aschers. and Graebner.—W. R. Sherrin. *A. tenuis* Sibth. = *A. vulgaris* With.—W. O. Howarth. This is what I take to be *A. nigra* With.—H. W. Pugsley. In the early nineties, through the kindness of the late James Bagnall, I became well acquainted with *A. nigra* in the arable fields of Warwickshire ; but since then have again and again in other counties been deceived by a strong superficial resemblance to the illustration referred to by Mr. Groves, and to actual specimens of the true plant, by the brownish-purple strong panicles of robust forms of both *A. vulgaris* With. (*tenuis* Sibth.) and less often of *A. alba*. The chief features of *nigra* are the prominent, oblong blunt and often jagged ligule, the panicle branches being " more strongly toothed, more rigid and more erect " than those of *vulgaris*, and the lower part of the branches being nearly undivided. I have not seen Mr. Groves' plant.—H. S. Thompson.

Apera interrupta Beauv. Swaffham, Norfolk, July 8, 1929. —E. M. Reynolds. Comm. J. E. Little.—Yes.—W. O. Howarth.

Deschampsia flexuosa Trin. [1299]. Selworthy Beacon, c. 900 ft. W. Somerset, July 8, 1929. This grass was growing out of a cushion of dwarf furze. Whereas the spikelets of all other *D. flexuosa* on the neighbouring moorland were purplish in colour, these plants attracted my notice by reason of their golden yellow spikelets.—E. C. Wallace. A quite characteristic example.—W. O. Howarth.

Avena fatua L. var. *pilosa* Syme [A. 80]. Waste ground, Shakespeare Rd., Finchley, Middlesex, Aug. 18, 1929.—J. E. Lousley. I should prefer var. *glabrata* Peterman, i.e., var. *intermedia* Lindgren.—W. O. Howarth.

Cynodon Dactylon Pers. Border of beach near Penzance, Cornwall, Aug 5, 1929.—H. S. Thompson.

Glyceria Borreri Bab. Shoreham, Sussex. Coll. W. R. Sherrin, June, 1929. Comm. S. L. B. I. Yes.—W. O. Howarth.

Festuca rottboellioides Kunth [1]. Centre of Weston-super-mare, Somerset, at road-side in dense masses, June 5, July 9, 1929. [2] On walls and on sea cliff above St. Ives, W. Cornwall, Aug. 4, 1929.—H. S. Thompson. Yes.—W. O. Howarth.

Bromus madritensis L. As a weed *locally* plentiful at border of allotment ground, Ashton Gate, N. Somerset, June

9, 1929. Very rare in Somerset.—H. S. Thompson. Yes.—W. O. Howarth. The species is separated from its allies by the very finely puberulous blades and sheaths of the lower leaves.—J. Fraser.

Bromus pratensis Ehrh. = *B. commutatus* Schrad. Chertsey Mead, Surrey, June 15, 1929.—I. A. Williams. There seems so often to be confusion between various species of *Bromus* that I venture to send these specimens. Some of them are beginning to show the dark red colour which is typical of the species as it gets old and sometimes leads to its confusion with *B. arvensis*. *B. pratensis* is a very common grass in riverside meadows both at Chertsey and across the Thames in Middlesex.—I. A. Williams. Quite good. It is a misfortune that these brome-grasses fall to pieces as soon as their specific characters become well developed.—J. W. White.

Bromus britannicus I. A. W. In a dry sandy pasture, Churt, Surrey. June 23, 1929. I. A. Williams. This grass, which I described in the *Journal of Botany*, 1929, p. 65, seems to be frequent in sandy fields (both arable and thin pasture) in S.W. Surrey. It will probably prove to have a very wide range in Britain. The plants are not always so small as the specimens which I now send, but these are quite typical, and just ripe enough for certain determination. For ease in seeing the character of the inner pale being shorter than the caryopsis, it would, however, have been better if the plants were 2 or 3 weeks older, for this character is most easily seen in plants which are in very ripe fruit and dropping to pieces.—I. A. Williams. Acceptable specimens of an interesting grass, which appears well to deserve the distinction conferred on it. J. W. White. I am of opinion that this is simply a form of *Bromus hordeaceus* L. ; and intend to keep it under observation in garden conditions with a view to confirming this.—W. O. Howarth.

Lepturus filiformis Trin. [A. 16]. Forming a dense carpet by the shore, Porchester, Hants. July 27, 1929.—J. E. Lousley. Yes.—W. O. Howarth.

Lastrea Thelypteris Bory. Ashcott peat-moor, Somerset, v. c. 6, July 20, 1929, during drought. It covers many acres in different parts of the moor, and grows under trees, especially Pines ; amidst bushes such as *Myrica*, *Rhamnus Frangula*, *Salix* and dwarf Birch ; and sometimes in coarse herbage usually mown in normal seasons. Owing to the long

partial drought of 1929 it was possible to penetrate far into portions of the turf moor which are usually inaccessible, and it was observed that this fern had taken root upon the actual base of the boles of several trees.—H. S. Thompson.

Chara fragilis Desv. Pond near station on Great Bookham Common, Surrey, Sept. 14, 1929. [Ref. A. 62]. J. E. Lousley. Yes.—J. Groves.

Chara——— [A. 57]. Pool in sandhills, Berrow, N. Somerset, May 20, 1929.—J. E. Lousley. *C. vulgaris* L.—J. Groves.

Nitella opaca Agardh.? [A. 63]. Small pools, Kynance Valley, Lizard, West Cornwall, May 24, 1929.—J. E. Lousley. Yes.—*N. opaca*. J. Groves.

Dr. Eric Drabble has kindly consented to act as one of the Official Referees.

SUBSCRIPTIONS, 1929.

	s.	d.
Ash, G. M.	10	6
Barton, W. C.	10	6
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Bickham, S. H.	10	6
Biddiscombe, W.	10	6
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Botanical Dept. British Museum	10	6
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Catcheside, D. G.	10	6
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Cooke, R. B.	10	6
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Geldart, Miss A. M.	10	6
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Hanbury, F. J.	10	6
Howarth, W. O.	10	6
Little, J. E.	10	6
Lousley, J. E.	10	6
Martin, Rev. W. K.	10	6
National Museum of Wales	10	6
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Pugsley, H. W.	10	6
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Williams, I. A.	10	6
Wolley-Dod, Lt.-Col. A. H.	10	6
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TREASURER'S BALANCE SHEET, 1929.

Receipts.	£	s.	d.
Balance in hand, December 31st, 1928 ...	6	17	4
Subscriptions for 1929	25	4	0
	£32	1	4

Expenditure.	£	s	d.	£	s.	d.
Printing—						
Forty-fifth Annual Report (200 copies) 44 pages and wrapper	24	0	0			
Card (and postage)		11	0			
				24	11	0
Working Expenses—						
Distributor	1	15	3			
Secretary : Envelopes and postage of Reports		10	6			
Ordinary postage ...		7	6			
				2	13	3
Balance in hand, Dec. 31st, 1929				4	17	1
				£32	1	4

31*st December*, 1929

G. GOODE,
Hon. Treasurer.

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(N.H.)
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BRIT. MUS. (N.H.)
BOTANY

Vol. IV., No. 2.

THE

FORTY-SEVENTH ANNUAL REPORT

OF THE

WATSON

Botanical Exchange Club

1930—31.

Referees:

H. W. PUGSLEY, B.A., F.L.S., 81, Alexandra Road, Wimbledon, S.W.19.

Rev. H. J. RIDDELSDELL, M.A., A.L.S., Bloxham, Banbury.

ERIC DRABBLE, D.Sc., F.L.S., Elmcroft, Freshwater, Isle of Wight.

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1931.

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1931.

BRIT. MUS.
(N.H.)
22 MAY 1931
BOTANY.

THE WATSON
Botanical Exchange Club

REPORT FOR 1930—1931

List of Contributors.

	Sheets		Sheets
W. Biddiscombe	... 50	H. W. Pugsley	... 18
R. J. Burdon ...	... 67	Ida M. Roper	... 64
A. J. Crosfield	... 9	S. London Bot. Inst.	161
J. Fraser ...	... 93	H. S. Thompson	... 271
L. B. Hall ...	... 28	E. C. Wallace ...	... 333
J. E. Little ...	... 252	J. W. White ...	... 139
J. E. Lousley	... 277		
Nat. Mus. of Wales	... 82	Total	1844

In regard to the names of contributors and the number of sheets sent in, there is no great difference from that of the previous year. Many interesting and useful gatherings have been received, including some rare Carices which were much appreciated. Fewer Mints and hardly any Salices came in, as against a fair number of Roses, Hieracia and Potamogetons. It has been noticed that Euphrasias never fail in numbers. No seed packets were contributed this time, which is to be regretted for they are very useful.

I again ask that when possible gatherings, especially of critical and obscure plants, should consist of over ten sheets. It is essential that once again certain members should be reminded that badly prepared and scrappy plants are useless, and will not be distributed. Several of the Referees have had to complain of such material, and it is only fair that plants they have to examine should exhibit clearly their salient features. It would also be easier for all concerned if small plants were not put into envelopes, but enclosed in folded sheets of paper of a moderate size.

The Referees have, as before, seen all the gatherings of critical plants, and it has become evident this winter especially

that this is really necessary. In this respect the Club is deeply indebted to the official Referees for all their trouble in so doing. They have sent useful notes, as have also the following, to whom we tender our best thanks, viz. :—E. G. Baker, C. E. Britton, J. Fraser, J. Groves, J. E. Little, J. E. Lousley, W. H. Pearsall, I. M. Roper, A. E. Wade, I. A. Williams and Lt.-Col. Wolley-Dod who has seen all the Roses. I speak the mind of the officials of the Club when I write that more contributing members are needed.

I extend my hearty thanks to all my correspondents concerning the Distribution for their ready help and advice.

E. C. WALLACE,
Distributor.

Sutton,
Surrey,
February 20, 1931.

For a third time the Club must express its obligations to Mr. E. C. Wallace for having undertaken the distribution ; and we unite with him in thanking the various Referees for examining and reporting on a large number of specimens. As briefly noted a year ago, Dr. Eric Drabble kindly consented to take the late C. E. Salmon's place as one of the official Referees, and he has also become a subscribing member again.

In regard to the complaints of the Referees and Distributor on scrappy or badly dried specimens, a marked improvement was observed in the specimens of one member. An effort should be made by not a few British botanists to aim at the frequent high standard of Continental sheets, particularly in their fullness. A bare minimum may suffice in the case of certain rare plants, but there is no excuse for inadequate sheets of the common ones. For critical plants the critical characters should be presented. Members might also sometimes collect a plant in two stages or more, when the characters cannot all be shown on a single gathering. Seedling plants are often interesting and useful.

It should be fully realized that some of the differences of opinion expressed by referees and others in this and other Reports may often be due to certain gatherings not being quite homogeneous.

Dr. Nordhagen of Bergen, who recently published in German an important illustrated paper on Scandinavian Papavers, wrote asking for suggestions as to the sort of plants

most desired by English members, for he hopes to send us a parcel next winter. And the Curator of the University Herbarium at Cambridge is hoping to be able sometimes to enter into the exchange on mutual terms.

A considerable amount of time has been given by the Treasurer and Secretary to the disposal of large numbers of the stock of Reports, kept for the most part by the former. In many cases the stock was quite needlessly large. An ample supply remains of all Reports since the 34th (1918), and a more irregular number of those forming Vol. 2 ; but there are none of the 21st or 33rd (the first of Vols. 2 and 3 respectively). A parcel of the late C. E. Salmon's duplicates and another from Mr. R. F. Towndrow, both kindly given to the Secretary, have been very useful in supplying a few wants among members and others. But, owing to the absence or scarcity of the earliest Reports, only a limited number of gaps were able to be filled in the sets of members. Parcels of Reports were also sent to several important public or institution libraries.

A request from the Senckenbergische Bibliothek, Frankfurt-am-Main, to exchange our Reports for the monthly *Natur und Museum* was gladly accepted ; and in exchange for our Vols. 2 and 3 we have been given a set of the *Bericht der S. Naturforschenden Gesellschaft* (now named *Natur und Museum*) from 1910. These high-class and well illustrated publications have been placed on permanent loan in the Botanical Library of the University of Bristol. We were informed that before this exchange was arranged no Library in Germany possessed our Reports.

The Club was invited to be represented by a delegate (with one vote) at the important discussions on Nomenclature held at the International Botanical Congress at Cambridge in August. We must thank Mr. Pugsley for attending and taking part in those long and arduous discussions, while the Secretary and several other members present at the Congress were perhaps enjoying some less tedious and more delectable attractions.

It is with deep regret that we record the death of Professor C. E. Moss at Johannesburg on November 11th, 1930, at the age of 58. Dr. Moss was a member of this Club from 1909 to 1915, and up to 1914 he contributed many useful notes and determinations to our Reports. To S. Africa in particular it is an irreparable loss. Among the hitherto published

obituary notices reference can be made to the sympathetic appreciation by Mr. J. Ramsbottom in the *Journal of Botany* for January, and to the longer one by Prof. Tansley (with portrait) in the *Journal of Ecology* issued in February. Moss was an extremely hard and thorough worker, with an acute and logical mind. He was born in Cheshire on February 7th, 1872.

We are indebted to Mr. Little for kindly supplying and defraying the cost of the prints of the "Skeg," which first appeared in the *Herts Express* at his instigation. He has also written the following interesting account.

H. S. THOMPSON,
April 6, 1931. *Hon. Sec.*

SKEG.

The print was produced by Messrs. Carling & Co. of Hitchin, from a photograph taken by Mary D. Thrussell (aged 14), of Pirton, Herts. It represents one of the forms of Wild Plum known at Pirton by the name of Skeg, which covers minor botanical differences of spinosity, size and form of leaf, pubescence, shape and quality of fruit. Mr. J. E. Thrussell makes the following distinctions between two forms both locally called Skeg. "1. *Black Bullace.* This is much like a Damson. It has spines, and the fruit is quite palatable. It occurs mostly if not altogether in old hedges, i.e., those planted before the local Enclosure Act (1811). 2. *Wild Plum.* Has no spines, and the larger fruits are quite sharp when ripe." Cf. Ref. 847 infra, which is however spiny.

Mrs. J. W. Luddington (in litt. 14 Feb., 1931), writes :— "Skeg—I think I remember hearing an old friend of my father's say that one year he paid his rent entirely from the yield of those growing in his hedges. This was in Kent."

Mr. Geo. Goode kindly looked the word up in the English Dialect Dictionary (1904), according to which it is reported in use in the counties of Kent, Northampton, Warwick and Oxford.

Dr. A. B. Rendle points out another dialectal word, for the fruit of the Bullace, viz., *Cricksey*, (Britten and Holland, Dict. of Eng. Plant Names, 1886, 'current in Cambs., N. Essex, and Norfolk'). This according to W. W. Skeat, in

"Skeg" at Pirton, Hertfordshire, 1930.

BRIT. MUS. (N.H.)
BOTANY

Eng. Dial. Dict. *ut supra*, is derived from a French word in heraldic use, *créquier*, wild plum, and takes various forms, as *creks* (a plural), *crickses* (a double plural). At Market Deeping, Lincs., the form is (*fide* W. D. Sweeting) Winter *cracks*.

Supplementing Eng. Dial. Dict., two examples of current use may be added. (1). "As sour as an old *cricks*," (Fordham, Cambs., *fide* E. F. D. Bloom, 1930). (2). "At Farcet, Hunts., the cottagers used to call Bullaces *cracks*. After the first frosts the fruits took on a sort of reddish brown dapple, somewhat like that of a greengage," (Mrs. J. W. Luddington, 1931).

The sheets distributed this year [Ref. H.2] probably correspond to this application of the name, as the coloration of the fruit was that which is here described.

Mr. Geo. Goode writes (10 Dec., 1930): "I have known *Cricks* or *Cricksey* for many years. It is a small round greenish-white plum which, on account of its pleasant acidulous taste, I have always liked for pies as the last plum of the season."

The only use of the singular that I have found is in T. Martyn's Miller's Gard. Dict. Under *Prunus domestica* he has "var. 27. *Winter Creke*. Latest ripe of all the sorts. Plentifully about Bishops Hatfield."

It seems fairly evident from the above particulars that *Cricks*, like *Skeg*, is a term of rather general application, and cannot be limited down, except by local use, to a strictly defined botanical form.

J. E. LITTLE.

Mr. Little wrote in February that he "recently submitted to Dr. W. B. Turrill, Kew Gardens, sheets of *Euphorbia* of the *E. Esula* and *E. virgata* group. As these are by no means easy, I give his determinations of plants which have been distributed through the Watson Club, 1915–1922."

(1). *E. Esula* L. var. *pseudo-Cyparissias* Jord. Dernford Fen, Cambs., June, 1922, A. J. Crosfield. [Report 1922, 221].—Is *E. virgata* W. and K. (This agrees with Dr. K. Rechinger's determination in 1927).

(2). *E. virgata* W. and K. Barry Dock, Glam., June, 1922. A. E. Wade [same page]. Is *E. virgata* W. and K. (This agrees also with Mr. Lacaita's determination).

(3). *E. Esula L.* Downs at Lewes, June, 1915, R. S. Standen. Is *E. virgata* W. and K. [Report 1915, 553].

Dr. Turrill remarked that "it is always desirable, and sometimes essential, to have fruiting as well as flowering material of critical Spurges."

45th Report, 1928, p. 494.

Carex contigua×*divulsa* ? [679]. I have now grown this Carex in my garden, 1926–1930, and wish to withdraw the above suggested name in favour of *C. divulsa* Stokes. Will members kindly make the correction ?—J. E. Little.

Correction to the Last Report.

P. 35, line 2.—For Rice *read* viee, and omit comma after (Stokes).

Ranunculus [*radians* Revel]. Abridge, Essex, v.c. 18, June 1, 1930 [Ref. B 17]. This was growing in a wayside pond whieh, judging by the presenee of numerous caddis eases, was well aerated.—J. E. Lousley.

These admirably presented specimens bear a certain superficial resemblance to *R. radians*, but are not nearly symmetrical enough for that species. The submerged leaves are longly petiolate, much too large and irregularly diffuse, and by no means regularly disposed. The floating leaves are those of *R. heterophyllus* and the plant is best under its var. *trifidus* Pears.—W. H. Pearsall. I have not seen Revel's plant, but take it this is correct.—J. Groves.

Ranunculus heterophyllus Weber, var. *submersus* Bab. A very muddy "pool," dried up in mid-summer, Mitcham Common, Surrey. May 24, 1930. [Ref. B 13]. These flowers are eonsiderably smaller than I should have expected to find in any form of *heterophyllus*. In most cases submerged leaves only are present, but one or two sheets show floating leaves which are similar to those of *heterophyllus*. I should consider the plant an eeologieal state attributable to the liquid mud in whieh it was growing. At mid-summer it was reduced to a small plant, about an ineh high, with 2–3 leaves with rigid

segments on the mud.—J. E. Lousley. Correctly named and accompanied by a most useful note of habitat conditions. I agree with Mr. Lousley that the flowers are unusually small, but they are at the apex of the stem and the latest produced. Below them are large heads of well-formed *heterophyllus* fruits. The flowers which preceded these must have been much larger than those now showing, and have been produced earlier when there was more water in the 'pool.'—W. H. Pearsall.

From the specimen before me, I should have thought this is a *Drouetii* form, but probably Mr. Lousley has followed its past history. In collecting aquatic plants, so liable to modification by external conditions, it is important to note as Mr. Lousley has done, any abnormal circumstance which may account for their peculiarities. Observation in the field is essential in such cases.—J. Groves.

Ranunculus Baudotii Godr. Pool near sea, Clymping, West Sussex, June 9, 1930. [Ref. B 48].—J. E. Lousley. Not *R. Baudotii*. "No other British species has such a large elongate receptacle upon which grow so many glabrous carpels." In B 48 the receptacle is small and round, with few fruits which are densely hairy at the top of the dorsal margin. Moreover the stem is too slender, the submerged leaves too small, for *R. Baudotii*. There are no flowers, but I should refer the plant to *R. trichophyllus* Chaix.—W. H. Pearsall. I should label this *R. Godronii* Gren. which Mr. Pearsall, in his admirable monograph, *The British Batrachia*, places under *R. radians*, but which I had thought nearer to *R. Drouetii*.—J. Groves.

Ranunculus Baudotii Godr. Brackish pool near Newhaven. East Sussex, August 10, 1930. [Ref. B 58].—J. E. Lousley. Yes. These specimens possess the characters lacking in B 48, —W. H. Pearsall. The carpels are hairy. I should call it *R. heterophyllus* var. *submersus*.—J. Groves.

Ranunculus auricomus L. Whyteleafe, Caterham Valley, Surrey ; roots March 23 and April 13, flowers May 11, 1930.—J. Fraser. Yes ; it comes under var. *reniformis* Kittel.—E. Drabble.

Nasturtium sylvestre R. Br. Blagdon Reservoir, N. Somerset, July 17, 1930. Has of recent years become one of the dominant plants there.—H. S. Thompson.

Cardamine amara Linn. var. *rubescens* Peterm. River Wey Navigation, Addlestone, Surrey, May 13, 1928. The specimens come from the same place as those in the Kew Herbarium ; yet I find that the colour is rather fugitive after being dried for a time.—J. Fraser. Yes, this is var. *rubescens* (or *erubescens*) Peterm., a mere colour-form.—E. Drabble.

See Report 1904–5, p. 8, and 1927–8, p. 423.—Ed.

This pretty variety, which was sent to the Club from near Weybridge in 1927, is rare in Britain. The lilac tinting of the petals would have been more conspicuous at an earlier stage. I have collected this plant near St. Anton, in the Vorarlberg, with the flowers wholly bright lilac. The varietal name should have been written *erubescens*.—H. W. Pugsley.

Alyssum incanum L. Railway bank on sandstone, Brislington, N. Somerset, August 9, 1930. Increasingly well established since 1915.—H. S. Thompson. Yes.—E. Drabble. The only *Alyssum* that makes its appearance in Surrey.—J. Fraser. Yes, *Flora of Bristol* (1912) gives it as a casual not established in the district, but it has persisted at Brislington since 1915.—I. M. Roper. A widely distributed Central European species frequent in Western Germany, and occurring not uncommonly as an alien in Britain. I think it is best regarded not as an *Alyssum* but as *Berteroa incana* (L.) D.C. —H. W. Pugsley.

Alyssum alyssoides L. Roadside near Avonmouth, W. Glos., June 4, 1930. Known there by Miss Roper since 1916. —H. S. Thompson.

Erophila verna E. Meyer (aggr.) [841 a]. L.N.E. Ry., Wymondley Road, Hitchin, Herts., April 14, 1930.—J. E. Little. I have not looked at every plant in this gathering, but those I have examined seem to be *E. hirtella* Jord. (*E. verna* E. Meyer, var. *hirtella* O. E. Schulz).—E. Drabble. Yes, to me it seems to be the type.—J. Fraser.

Cochlearia anglica Linn. [var. *Hortii* Syme]. Church Island, Menai Strait, Anglesey, May 11, 1905.—A. O. Hume. Comm. S.L.B.I. My specimen cannot be called *Hortii* ; the habit is right and the fruits are rather small, but the lower leaves are gradually narrowed to the base, not rounded—a very characteristic feature of *Hortii*. I think this is a small specimen of ordinary *anglica*.—E. Drabble. *C. anglica* type. —J. Fraser.

Erysimum suffruticosum Spreng. (*Cheiranthus erysimoides* Thuill.). Garden at Cambridge, October, 1930.—A. J. Crosfield. This is referred to *E. murale* Desf. in *Index Kewensis*.—J. Fraser.

Viola odorata L. var. *subcarnea* Parl. f. *imberbis*. Hedge, Beach, near Lansdown, W. Gloster, v.c. 34, April 10, Sept. 20, 1930.—Ida M. Roper. *Subcarnea*, no doubt, as Miss Roper has seen it in the living condition. It is not easy to distinguish some of the colour-forms when dry ; *imberbis* certainly, and as beardlessness may be associated with different colour-forms, Miss Roper is justified in calling this var. *subcarnea* Parl. f. *imberbis*.—E. Drabble. Correct ; the flowers are of the required colour as admitted by Mrs. Gregory, and the two lateral petals are beardless.—J. Fraser.

Viola Déséglisei (Jord.) Bor. [865]. Hundred acre Field, Great Wymondley, Herts., June 7, 1930.—E. Little. Yes, the plants are all rather small and do not show the sharply ascending basal branches, but they are unmistakable.—E. Drabble.

Viola ruralis Bor. [855]. Market Garden, near Ash Brook, St. Ippolyts, Herts., May 21, 1930. An over-winter plant.—J. E. Little. Most of these are certainly *ruralis* : I have pencilled " yes " on the labels of these. Some are unusually upright for British *ruralis*, though they agree well in habit with some French specimens, e.g. one ex. Herb. Déséglise at the Imperial College of Science.—E. Drabble. My specimen is a full sized plant, and in its second year. It is the type form.—J. Fraser.

Viola arvatica Jord. [909] Near Punches Cross, Pirton, Herts., Sept. 16, 1930.—J. E. Little. Yes, excellent *arvatica* ; very well selected.—E. Drabble. Agrees perfectly with Jordan's and Dr. Drabble's description.—J. Fraser.

Viola derelicta Jord [858]. Wilbury Hill, Herts., May, June, Aug., Sept., 1930.—J. E. Little. Yes, a very useful set. Some of the specimens are rather large-flowered, like the Scottish plant.—E. Drabble. The simple upright stem serves to distinguish this from the zigzag stem of small specimens of *V. arvatica*.—J. Fraser.

Viola contempta Jord. [902]. Stubble, near Highover Farm, Hitchin, Herts., Sept. 8 and 24, 1930.—J. E. Little. Some of these examples have a dark purple band across the

tips of the two upper petals, but even on the same plant cream-coloured flowers, and flowers with purple tips may be observed. When faded, the colour runs, and the whole petal becomes suffused with lilac. Associated with much *V. agrestis* and some *V. arvatica*.—J. E. Little. There are two different plants here, I think ; (1) Those with pale yellow flowers or with the upper petals slightly suffused with purple, are *contempta* ; (2) those in which the upper petals are definitely blotched at the tips with bright purple ; these I think are hybrids between *contempta* and the garden pansy. I have indicated my determination on every label.—E. Drabble.

Viola contempta Jord. var. *patula* Drabble. [923]. Hitchin, Herts., Sept. and Oct., 1930.—J. E. Little. Yes ; see *Journ. Bot.* 1929, p. 74. This was named as a variety because Jordan's description of *contempta* (*Pugillus*, p. 24) does not cover spreading and prostrate plants. This variety shows, when typical, many branches widely spreading from the base and more or less prostrate.—E. Drabble.

Viola lutea Huds. f. *amoena* (Henslow) Drabble. [883]. Meadow, Dochart Valley, Killin, Perthshire, July 16, 1930.—Leg. K. D. Little.—Comm. J. E. Little. Yes ; the finest gathering of *amoena* Henslow that I have ever seen. Some of the very large-flowered specimens approach f. *sudetica* (Willd.).—E. Drabble. Yes, very plentiful in pastures in the valley of the Dochart above Killin.—J. Fraser.

Polygala dubia Bellynck ? Chalk hill above Bratton, N. Wilts., June 21, 1930.—H. S. Thompson. One or two pieces show a false rosette of obovate leaves at the base of the branches. The lateral veins of the fruiting sepals do not anastomose freely on their outer side, as in the *vulgaris* group, and the lobes of the aril are decidedly unequal. These characters point to *P. calcarea* F. Schultz.—J. E. Little. I have seen the specimens received by Mr. Little ; they are *P. calcarea* F. Schultz.—E. Drabble. Of two pieces sent by me to Dr. Drabble he says " one I call *calcarea* unhesitatingly : the other I think is different, and I call it *oxyptera* auct. angl. (? *dubia* Bellynck "). Mr. Little also points out that the forms of the wings in these two species are variously described as acute or obtuse, and that there are similar discrepancies in the relative width and length of the wings and capsules. There was evidently a mixture, but three of the specimens retained are obviously not *calcarea*.—H. S. Thompson.

Silene [*dubia* Herbich.]. Culver Cliff, Isle of Wight, June 21, 1930. [Ref. B 49]. On this cliff there appear to be two forms of *Silene dubia*; one about 40 cms. high, with very dark green foliage, the other about 25–30 cms. high with shorter leaves. They seem to be merely states depending on degree of exposure to the sea winds.—J. E. Lousley. A smaller plant than *S. nutans*, with much shorter radical, and much shorter and narrower cauline leaves.—J. Fraser. The specimen sent is a strong example, just out of flower, of the plant which C. E. Salmon identified with *S. dubia* Herbich (*Journ. Bot.* xliii. 127, 1905). But Moss shows (*Cambridge British Flora*, iii. 79, 1920) that this form is identical with the specimen of *S. nutans* in the Linnean Herbarium, and he therefore treats it as the typical form of *S. nutans* L. There is no doubt of the correctness of Moss' identification, for Linnaeus' specimen is an excellent and unmistakable one, which must be accepted as a type. This view accords with that held on the Continent, and I have myself collected exactly similar Swiss examples. In the Club's Report for 1922–23 (p. 207) Mr. Lacaita remarked on specimens sent as *S. dubia*, "I am unable to distinguish this plant from ordinary *S. nutans*." The name *S. dubia* Herbich should evidently have been expunged from the last editions of the *London Catalogue of British Plants* and Druce's *Plant List*.

The broader-leaved, white-flowered plant known to British botanists as *S. nutans* is referred by Moss (l. c.) to a variety *smithianus* (sic), and is said to be apparently unknown outside Britain. Moss includes under this variety both the Nottingham Catchfly and the taller form of Dover Cliffs, which Hudson (*Fl. Anglica*. ed. 2, i. 186 and 188, 1778) and Smith (*Fl. Brit.* ii. 466–7, 1800) had considered distinct. These two plants are closely allied, if not identical, and apparently constitute a well-marked endemic form whose status needs further investigation.—H. W. Pugsley.

Cerastium semidecandrum L. [871]. Rowney Warren, Beds., May 26, 1930.—J. E. Little. This very dwarf plant forms a close carpet in spring upon wayside sand of the Greensand. Dr. Abbot (*Fl. Bedford*, 1798, No. 343) records a *Cerastium pumilum* Curt. which is considered by Dr. G. C. Druce (*Vict. Co. Hist. Beds.*) to be *C. semidecandrum*. It is possible that the present plant may represent it. Other taller, more erect plants occurred on the outskirts of the Warren.

Ascherson and Graebner (Fl. n-o-d. Flachl.) have under *C. semidecandrum* a var. *pumilum* Dietrich (Fl. March.), of which the only distinguishing character given is :—' Pflanze schr klein.'—J. E. Little. I think this is a stunted state of ordinary *semidecandrum*. Mr. Little (*in litt.*) suggests that it may come under *C. semidecandrum* var. *pumilum* Dietrich which seems to have this status, and I think he is right. An exactly similar form grows abundantly on the sand hills at Wallasey, Cheshire.—E. Drabble. Correct.—J. Fraser. Yes ; if ' Pflanze schr klein ' was the only distinguishing character, it is unfortunate the variety was ever described, particularly as *C. pumilum* Curt. is a good species.—H. S. Thompson. *C. semidecandrum* (a) *genuinum* Rouy.—J. E. Lousley.

Cerastium vulgatum L. (*C. caespitosum* Gil. Asch. and Graebn.). [862]. Ippolyts Common, Herts., June 2 and 11, 1930. Petals $1\frac{1}{4}$–$1\frac{1}{2}$ as long as sepals.—J. E. Little. The late C. E. Salmon wrote (13 July, 1921) :—" I have seen the large-flowered state of *Cerastium triviale* before. It is not common, and I do not know a name for it. Var. *pratense* Diard is described by Rouy as having petals one half longer than the calyx."

Locally, in the Ivel district, plants with larger flowers are not uncommon in the small relics of marshes. But they grade towards smaller-flowered plants almost imperceptibly.

Coste (Fl. Fr.) notes that *C. triviale* Link " varie à corolle et capsule grandes, 1–2 fois plus longues que le calice (*C. fontanum* Baumg)."—J. E. Little. Yes ; *C. vulgatum* L. (*C. triviale* Link). Perennial.—J. Fraser. This is var. *pratense* Diard, the large-flowered form of ordinary *vulgatum*, not uncommon in the South of England.—E. Drabble. This is *C. triviale* Link var. *pratense* Diard (see Rouy iii, 207) with petals $1\frac{1}{2}$ times as long as the calyx.—J. E. Lousley.

Stellaria neglecta Weihe, var. *Elisabethae* F. Schultz. Hedgebank, Stockwood Vale, near Keynsham, North Somerset, May 26 and June 8, 1930. Calyx and pedicels quite glabrous.—Jas. W. White. Correct, but F. Schultz described it as a species, so his name should be in brackets.—J. Fraser. The leaves are shortly acuminate, the stamens more than 5, the seed prominently and ± acutely tubercled. This is the var. *umbrosa* Opiz of Hooker, for which C. E. Salmon preferred the name var. *Elisabethae* (" Fruits and Seeds." S. E. Union of Scientific Societies, 1928, p. 42).—J. E. Little. As F.

Schultz described this plant as a species (*Archives Flora*, p. 302–3, 1861) the authority should be enclosed in brackets. Schultz' name, which is supported by a good description, has been wisely adopted in lieu of the doubtful *S. umbrosa* Opiz. The varietal name *decipiens* E. S. Marshall, which was proposed (under *S. umbrosa*) for typical *S. neglecta* (*Journ. Bot.* xl. 214, 1902) has been erroneously left standing in the *London Catalogue* and the *Plant list*.—H. W. Pugsley.

Stellaria glauca With. Marsh by Walton Bridge, Middlesex, July 1, 1928.—E. C. Wallace.

Arenaria serpyllifolia L. var. *viscidula* Roth. Durdham Down, Bristol, v.c. 34, June 4, 1930 ; and Burnham Sandhills, N. Somerset, v.c. 6, June 19, 1930. (2) Var. *scabra* Fenzl. (i.e. the ordinary state in Britain) near Black Rock, Cheddar, N. Somerset, July 4, 1930, part of a large plant 16 inches across.—H. S. Thompson. Yes ; the Burnham specimens appear to match the late C. E. Salmon's plants from Nagden Marshes, Kent, Sept. 15, 1924.—J. E. Lousley.

Sagina apetala Ard. Sandy field near Reigate Heath, Surrey, August 4, 1930.—E. C. Wallace. Yes.—E. Drabble. Yes ; *S. apetala* Ard., the rarer of the two common British forms, var. *imberbis* Fenzl., with peds. and seps. eglandular, foliage nearly glabrous, with fewer and shorter cilia only near the leaf-bases.—W. H. Pearsall. I think a lax, eglandular form of *S. apetala* Ard.—H. W. Pugsley. Correct, the common form.—J. Fraser. Yes, the glandular-peduncled form. One of the two plants on my sheet, with central root, and branches spreading all round, looks like f. *prostrata* (var. *prostrata* S. Gibson). I think it cannot be ranked higher than a form.—J. E. Little. Yes, *apetala* Ard., with eglandular peduncles and sepals, and a few long hairs on the leaves. The leaves are not sufficiently glabrous to come under var. *imberbis* Fenzl. especially as the few hairs are long, and at the same time they are not hairy enough to come under the ciliate-leaved var. *barbata* Fenzl. The specimens I received are intermediate between these two varieties.—J. E. Lousley.

Hypericum ———. Gravelly field near Perrotts Farm, Burgh Heath, Surrey, Aug. 1929 and 1930. I cannot make this plant out. It looks like a hybrid. Quite normal *H. perforatum* grew near it.—E. C. Wallace. Is *H. Desetangsii* Lamotte.—A. E. Wade. I think nearest *H. Desetangsii*.—

H. S. Thompson. I think this is *H. Desetangsii* Lamotte. The generally acute sepals, the many translucent glands in the leaf, and the obsolescent or obsolete intermediate ridges on the stem all point to this. I have never seen the stem nearly so strongly angled (or ridged) as that figured in "Butcher and Strudwick," plate 109. Salmon's figure (*Journ. Bot.* 1913) gives a more correct representation, though the angles of the stem are not sufficiently indicated.—E. Drabble. *Later :* I still say that this is nearer to *Desetangsii* than to anything else. The sepals, especially in the buds, are broader and more obtuse than usual an the stem less strongly angled, though not less so than in Salmon's plate. It is not *dubium* nor *perforatum*, and of course *tetrapterum* is out of the question. I cannot rule out a hybrid origin but am very loath to invoke hybridity without very strong evidence.—E. Drabble.

Mr. W. R. Sherrin and I carefully examined this plant and came to the conclusion that it was probably *H. perforatum* × *dubium*, as it showed characters of both, but was clearly neither one nor the other.—E. C. Wallace. Mr. Fraser writes :—These plants have smaller leaves than my *H. dubium* from Kent, nor are the stems so distinctly quadrangular. Some of the sepals are more or less acute. This variation does suggest hybridism, and the smaller leaves might suggest *H. perforatum* as the other parent, giving narrower leaves, more translucent glands (in some of the leaves) and some of the sepals acute.—E. C. Wallace.

I think from the scarcely quadrangular stem and the numerous pellucid dots of the upper leaves that this is *H. dubium* × *perforatum*. This hybrid, which I have raised artificially, formerly occurred on Wimbledon Common and probably appears frequently in nature. I suspect that *H. Desetangsii* Lamotte, whose characters are admittedly unstable, consists of forms of this cross.—H. W. Pugsley.

Hypericum linariifolium Vahl. Near Dartmouth, S. Devon, 1900.—Coll. F. J. Hanbury, Comm. J. W. White. This is the typical species, which grows also in Carnarvonshire. It differs considerably from var. *approximatum* Rouy, which occurs in Jersey. Vide *Journ. Bot.* liii, 162 (1915).—H. W. Pugsley.

Hypericum elodes L. Whitmoor Common, Surrey, Aug. 7, 1930.—R. J. Burdon.

Radiola linoides Roth. Shapwick Moor, N. Somerset, Sept. 7, 1930. Forming a thick carpet on a rather recent peat cutting, visited by British Association botanists that day.—H. S. Thompson. Very scarce in Surrey.—E. C. Wallace.

Erodium cicutarium L. var. [*chaerophyllum* (Cavan.) ?] [Ref. 4424]. Waste stony ground on limestone ; left (or Somerset) bank of R. Avon near Bristol, v.c. 6, Oct. 10, and 15, 1930. Autumnal rosettes and seedlings in flower or fruit, and pieces of older plants for comparison of stem, etc. Petals bright pink, not spotted, unequal, largest 5–6 mill. by 2–3 mill. ; stigmas purple. The flowering or fruiting specimens mostly grew on the better drained uneven ground, the rosettes with no flower or fruit mostly on flatter though slightly higher moss-covered ground adjoining.—H. S. Thompson. We have compared this with Cavanilles' description and figure. Cavanilles' plant has 5–6 flowers to the peduncle and the petals are described as orbicular and the colour pale blue. This is rather young material, so it is difficult to express an opinion.—E. G. Baker. I have a specimen from Reigate Heath so labelled by the late C. E. Salmon in about the same stage of growth but without fruit. He afterwards withdrew the name and wrote " probably a young example of *E. triviale* Jord," telling me that Erodia could seldom be determined from plants of the first year's growth.—A. H. Wolley-Dod. It was a sheet of that gathering by C. E. Salmon by which I was guided in suggesting the varietal name.—H. S. T.

Erodium Boraeanum Jordan. Culver Cliff, Isle of Wight, June 21, 1930. [Ref. B 9]. Flowers pure white, unspotted. Carpels hairy, stigmas pale yellow. Fertile filaments very gradually enlarged at the base. Peduncles about 4–5 flowered. Petals about equalling the calyx. Stem decumbent. Plant large.—J. E. Lousley. Correct.—E. G. Baker. This looks uncommonly like a specimen I once gathered at Shoeburyness and grew from seed in my garden for some years, during which it reproduced its characters exactly. It had the same conspicuous large white stipules and the tufted growth of the leaves at the nodes. I never got a name for it. Marshall thought it might be var. *chaerophyllum* Cav., and Salmon thought its leaves in fascicles were very interesting, their cutting being like that of E. *triviale* Jord., but he gave it no name. I do not think Mr. Lousley's plant can be *E. Boraeanum*,

since that has obtuse leaf lobes, these being very acute. The white petals are due to albinism, not to any specific character. Those of my Shoeburyness plant were pale rose.—A. H. Wolley-Dod.

Erodium glutinosum Dum. Foreshore, near Littlestone-on-Sea, E. Kent, July 11, 1930.—E. C. Wallace. Correct.—E. G. Baker. This agrees quite well with the description of E. *glutinosum* Dum. except in its elongate habit. It should be "small and more or less compact." There is no fruit which is the best distinction from the very similar *E. Lebelii*, in showing no furrow round the pit of the carpel.—A. H. Wolley-Dod.

Erodium ———. Dunes, Littlestone-on-Sea, East Kent, July 11, 1930.—E. C. Wallace. This is a form of *E. neglectum* Bak. fil. and Salm. For description of this plant see *Journ. Bot.* 1920, p. 124, pl. 554a.—E. G. Baker.

Trifolium squamosum L. Sea bank at mouth of R. Brue, N. Somerset, June 19, 1930.—H. S. Thompson.

Lotus tenuis W. and Kit. Field below Holmbury Hill, Surrey, July 13, 1930. A few sheets from the Weald clay where I have found it in several localities this year. See last year's Report.—E. C. Wallace.

Vicia Orobus D.C. Railway embankment, Dolygaer Station, Radnor, June 19, 1929.—A. E. Wade, Comm. Nat. Mus. of Wales.

Lathyrus tuberosus Linn. Near Fyfield, North Essex, July 27, 1930. I was shown the locality for this plant by some village boys, who are well aequainted with it under the name of "The Fyfield Pea." The charaeteristic tubers are extremely diffieult to dig up for examination, and the plant grows both in the standing corn and the surrounding hedges. Dr. Walker-Arnott's statement that the flowers fall off without forming pods is probably due to the fact that the Pea is eut with the eorn. It has been known here by farmers since about 1800.—J. E. Lousley. Pods are forming freely on my piece. —J. Fraser. If Fyfield farmers knew it since about 1800, it is strange that although a denizen, no botanist recorded it until Oetavius Corder found it in 1859 (Gibson's *Fl. Essex*, p. 88) and Joshua Clarke in 1860 (*Journ. Linn. Soc.* v. 187). —H. S. T.

Prunus domestica×*insititia*. [H 2]. Lane near Purwell, Gt. Wymondley, Herts., Sept. 20, 1930.—J. E. Little. For notes, see W. E. C. R. 1922, 211, and 1923, 381. Owing to the very late season of flowering the present year has been unusually favourable for observation of fruits of *Prunus*. In my records the bushes only fruit well about once in seven years.—J. E. Little. Certainly mueh nearer the garden Plum. The pubescence of the peduncle is extremely short. The leaves also point in the direction of the Plum.—J. Fraser.

Prunus domestica L.×*insititia* L. [847]. Near Toot Hill, Pirton, Herts., April 28, Sept. 16, 1930.—J. E. Little. The *domestica* element is seen in the large, broad leaves (up to 7.5 cm. long and 5.0 cm. broad) ; the *insititia* element in the coarse hairs on the spurs, the pubeseent pedunele and the globular retuse-topped fruit (up to 2.8 cm. in diameter). The fruit is inclined, but not markedly pendulous. The word "Skeg" is in local use for this and other forms of larger-fruited *Prunus* ; and more particularly for a very spinous form closely related to *P. spinosa*, having fruits up to 2.0 cm. diameter, "quite palatable," (fide J. E. Thrussell). This latter has faint traces of pubesecnce on the fruiting peduncle, and old spurs with some hairs.—J. E. Little. The young branches, the pedicels and the lower leaf-surfaees are downy. I think this is *P. insititia* with rather large leaves and broad petals.—E. Drabble. I agree to the name. The pubeseence on the peduncles is unusually prominent. I think it may have arisen from a garden Plum all the same, because some of them have been proved experimentally to be heterozygous for all parts. Birds carry away the fruits from gardens and drop the stones in hedges, etc.—J. Fraser.

Rubus ———. Sugar Fen, King's Lynn, Norfolk, v.c. 28, June 9, 1930.—I. M. Roper. *R. suberectus* Anderss. N. C. R. —H. J. Riddelsdell.

Rubus echinatus Lindl. Ockham Common, Surrey, Aug. 7, 1927.—E. C. Wallaee. See Report 1927–28, p. 430. These speeimens are from the same bushes and are good *R. echinatus*. —E. C. Wallaec.

Rubus ———. Near Hookhams, Hillgrove, Lurgashall, W. Sussex, Aug. 2, 1930.—R. J. Burdon. The panicles seem to be all from one bush : the stem pieces are from at least three different bushes ; labels marked × eover mixed speeimens.

The rest show badly torn stem pieces, but I feel sure that the material is from *R. Bloxamii* Lees. N.C.R.—H. J. Riddesldell. Only 3 or 4 sheets were distributed.—E. C. W.

Alchemilla pratensis Schmidt. [821]. Hort. Hitchin (Root ex basin of R. Fiddich, Banffshire, 1928. Leg. K. D. Little), Sept. 23, 1929, June 9, 1930.—J. E. Little. "It is not usual to find so many hairs on the urceoles and pedicels of *A. pratensis* Schmidt, but I think your plant is undoubtedly that."—The late C. E. Salmon, Nov. 1929.

Rosa canina var. *latebrosa* (Déségl.). Greyswood, Surrey, Sept., 1930. I send these as a curious instance of change in a bush. When Mr. E. B. Bishop found this in 1929 it was plentifully supplied with aciculs on the flowering stems, similar to the specimens I sent last year from Burningfold. This year, although we searched the bush carefully, we could not find any. There is no question of its being the same bush, as it is quite isolated in a field. It will be interesting to see what happens next year.—W. Biddiscombe. I do not think this is var. *latebrosa*. There is not a single aciele on any of the flowering shoots, and the whole armature is too regular. I have seen var. *latebrosa* from this station gathered by Messrs. Biddiscombe and Bishop, in an obvious though weak form, and no doubt some of the bushes run down into other varieties, these not having been carefully gathered. It is one of the Scabratae, though even that group is not strongly marked. I should label them var. *vinacea* (Baker) Rouy.—A. H. Wolley-Dod. Both glandular setae and acicles are lacking from the flowering shoots, and the subfoliar glands are few. I would call it *R. canina* var. *vinacea* (Baker), even though the stipules and bracts are not vinous red.—J. Fraser.

Rosa dumetorum Thuill. var. *jactata* Déségl. By Nailsea Ponds, N. Somerset, June 28, 1930.—Ida M. Roper. I have discarded the name of var. *jactata* as unsatisfactory, and too near var. *platyphylla*, but think this is not what I used to call *jactata*. I can give it no nearer name than f. *urbica* which is a very variable form.—A. H. Wolley-Dod.

Rosa dumetorum Thuill. var. *incerta* (Déségl.). Kingsthorpe Woods, near Pickering, N.E. Yorks, v.c. 62, Sept. 17, 1930. —Ida M. Roper. Collectively this gathering may go under var. *incerta*, but individual specimens might be segregated. Those with some or all of the peduncles smooth are what

R. Keller proposed to call var. *incerta* f. *subhispida*, but did not publish the name. Those with decided biserration run near *R. Burnati* Chr., but I have included that in v. *incerta*. The leaflets are sometimes almost glabrous, making the specimen near *R. canina* v. *andegavensis*, but I have no doubt all came from the same bush, which was not a well-marked one.—A. H. Wolley-Dod. Petioles and midrib only pubescent. Styles woolly. I would call it *R. dumetorum* var. *semiglabra* (Rip.).—J. Fraser.

Rosa glauca Vill. var. *subcristata* R. Kell. Dunsfold Common, Surrey, Sept. 11, 1930. As far as we could see there was only the one bush on the Common, probably bird sown, as it is not a southern Rosa. It could not have been introduced artificially.—W. Biddiscombe. Yes, but not under that nomenclature. R. Keller never used the name *subcristata*, which I now replace by the older one of *complicata* Gren., reduced to a variety of *glauca* by H. Braun. It is a very rare variety in the south, being only known from one other Surrey station and from Dorset and North Somerset. The specimens have been gathered rather late for a variety which always matures early.—A. H. Wolley-Dod.

Rosa tomentella Lem. var. *Borreri* ×. Chiddingfold, Surrey, Sept. 21, 1930. Specimens of this Rose were submitted to Col. Wolley-Dod by my friend Mr. Bishop and named as above. There was a quantity of sterile fruit on the bush, which is supposed to be a sign of hybridity. The glandular peduncles led me at first to think it was *decipiens* but the leaves are much too large I believe for that. At the same time I should say the prickles on the petioles should be stronger. We found a similar Rose last year at Burningfold, with an equal number of barren fruit but much smaller leaves.—W. Biddiscombe. I would label this *R. obtusifolia* Desv. var. *decipiens* Keller and Gams., because only the midrib and secondary nerves are hairy, and the latter eglandular. Without prejudice as to the specific name which has only recently been referred back to the original *R. obtusifolia* as the type of the group.—J. Fraser. I told Mr. Biddiscombe that this was probably a hybrid of var. *Borreri*. It is mainly that variety, but its ill-formed fruit makes me suspect hybridity. I now place it under *R. obtusifolia*, which replaces *R. tomentella* as the type of the species—A. H. Wolley-Dod.

Rosa ———. Banks of the Tweed, near Galashiels, Selkirk, July 8, 1930.—R. J. Burdon. It is a pity that these are not better specimens. The scrappy ends of branches in flower are valueless. It appears to be a *tomentosa* hybrid, from its ill-formed fruit and marked heteracanthy below the inflorescence which does not show on all the small flowering branches. The other parent is not *spinosissima*, but is indeterminable from these specimens. It may be *mollis*, which would constitute a hybrid not known for certain from Britain.—A. H. Wolley-Dod.

Rosa rubiginosa L. [var. *echinocarpa* Gren.]. Dunsfold Common, Surrey, Sept. 11, 1930. I do not know if Col. Wolley-Dod will pass these for the variety. . . . . Most of the fruits are more or less echinate and the very globular fruits and small leaves are very different from the forms of *apricorum* I have seen and sent in last year. All from the same group of bushes.—W. Biddiscombe. This is not var. *echinocarpa*, the leading features of which are mixed armature on the main stems, and long eglandular acicles all over the fruit. Nearly all these fruits are smooth or a little aciculate only at the very base. It is the form of var. *typica* which I used to segregate as var. *apricorum* (Rip.) but now combine with v. *comosa* into my var. *typica*.—A. H. Wolley-Dod. The roundish ovoid fruits have acicles, but no glandular setae. I find a few suprafoliar glands however, which are usually absent in British specimens. It seems to me to be passable for the variety.—J. Fraser.

Rosa micrantha var. *trichocarpa* Rouy. Copse on White Down, Surrey, July 20, 1930.—W. Biddiscombe. I do not feel satisfied that this is var. *trichocarpa*. That should have broad very hispid fruit. These fruits are unusually narrow, and many are quite smooth, none very hispid. The aeicles under the inflorescence are in its favour but should be more numerous, and may sometimes be seen in var. *typica*, which also sometimes has hispid fruit. I have seen forms of v. *trichocarpa* with fruit as narrow as these, but that defect is partly counterbalanced by their being very hispid. I should label these *R. micrantha* v. *typica* W-Dod, towards v. *trichocarpa* Rouy.—A. H. Wolley-Dod. It comes very close to the variety at least. The glands on the flowering branches under the inflorescence are not very numerous, and there are no acicles there, though I think they are often absent by defect in Surrey specimens. I hope it may pass.—J. Fraser.

Rosa micrantha Sm. [var. *hystrix* Baker]. Barton Mills, W. Norfolk, v.e. 28, Aug. 21, 1930.—Ida M. Roper. Not *hystrix*. It is on altogether too large a scale for that, but it is the rarer variety *septicola* Gren. which I have only seen from E. Kent and Surrey, so it is a new county record.—A. H. Wolley-Dod. The styles of this are hispid, and so my specimen could not come under *R. micrantha*. It is *R. rubiginosa* var. *apricorum* (Rip.), and var. *comosa* (Rip.) does not always differ.—J. Fraser.

Rosa agrestis var. *arvatica* (Pug.). Hillside at Haseombe, Surrey, Aug. 1930. Coll. E. B. Bishop. Comm. W. Biddiscombe. *R. agrestis* var. *arvatica* Rouy. Correctly named.—A. H. Wolley-Dod.

Sorbus Aria Crantz. var. *majestica* Zabel. Laneside by Oxted chalk pits, Surrey, Aug. 3, 1930. See *Journal of Botany*, 1930, 175.—E. C. Wallace. Yes, the same as *Pyrus Aria* var. *majestica* Prain. I hope Mr. Wallace agrees with me that it is a wild tree and could not have been planted where growing. —J. Fraser. Yes, quite native, no suspicion that it was planted.—E. C. W. This comes from the original locality for the variety, but material showing the characteristic large fruits is desirable.—H. W. Pugsley.

Crataegus monogyna Jaeq. × *Oxyacantha* ? Brockley Combe, N. Somerset, June 6 and Aug. 6, 1930. Tall trees with rather large leaves.—H. S. Thompson. So I should call it. The pubescent peduncles and calyx tube, as well as the small fruit and solitary style are those of *C. monogyna*. The little-divided cuneate leaves are those of *C. Oxyacantha*.—J. Fraser.

Callitriche platycarpa Kuetz ? [Ref. 4323]. Ditch, Sharpham Peat Moor, Somerset, v.e. 6, June 14, 1930. The rosettes formed a striking feature above the dense mass of submerged aquatics, and they remained conspicuous until October, but on November 17 were frozen under half an inch of ice.—H. S. Thompson. Yes, this is one of the many forms included under the aggregate *C. stagnalis* Scop. There are plenty of fruits on my example but they are rather immature. They are relatively large, flattish, almost round in the broad view they most readily present, length and breadth sub-equal. Looked at from above, the lobes are visibly divergent from their common axis—some authors (viewing them from the front) describe them as parallel. Both terms

may be correct of the same fruits. The dorsal margins are sharply keeled or ' winged.' This character is valuable but is often difficult to make out. The fruits of these examples have an appreciable transparent ' edge ' to the dorsal margin. —W. H. Pearsall. This is *C. obtusangula* Le Gall.—H. W. Pugsley. I now agree with Mr. Pugsley.—H. S. T.

Callitriche truncata Guss. ? [Ref. 4324]. The same rhine on Sharpham Peat Moor, Somerset, v.c. 6, June 14 and Oct. 3, 1930. Some of the lower and practically leafless stems were nearly two feet in length. I regret specimens are not better.—H. S. Thompson. In the absence of fruits it is impossible to give a stable determination of these plants. They are obviously either *C. autumnalis* or the var. *occidentalis* of *C. truncata*. The former is a more robust plant, with more numerous and much darker and longer leaves, so tentatively I am inclined to let the name stand. Plants from the same habitat, gathered earlier in the 1931 season, would be acceptable.—W. H. Pearsall.

Ribes alpinum L. Valley of the Dove, near Ashbourne, Derbyshire, per Walter Barratt, May 18, 1910.—A. O. Hume. Comm. S.L.B.I.

Peplis Portula L. A muddy pond at 1,000 feet on the Mendip plateau, E. of Blackdown, Somerset North, had on June, 1930, a broad belt of this plant so strangely rare in Somerset.—H. S. Thompson. It ascends to 1,200 feet in Yorkshire.—J. Fraser.

Epilobium montanum L. ? Clifton, Bristol, v.c. 34. A garden weed, and on wall adjoining, June 4, 1930.—H. S. Thompson. Yes, excellent specimens of the large-flowered form.—E. Drabble. Correct.—A. E. Wade.

Epilobium tetragonum Curt. Sandy allotment ground near Weybridge, Surrey, July 10, 1930. [Ref. B 50].—J. E. Lousley. Yes.—E. Drabble and H. W. Pugsley.

Epilobium tetragonum Curt. Waste ground near Thames at Ham, Surrey, July 9, 1930. [Ref. B 54].—J. E. Lousley. Yes, this is very good *tetragonum*. The basal autumnal shoots ought to be present for complete representation.—E. Drabble. Correct.—A. E. Wade. *E. tetragonum* Curt., luxuriant.—H. W. Pugsley.

Epilobium [*Lamyi* F. Schultz ?]. Moist roadside, near Brook, Witley, Surrey, July 13, 1930. [Ref. B 20].—J. E. Lousley. This is *E. montanum*, a common, tall, stout and rather large flowered form. There is no suggestion whatever of *Lamyi* ; the stigma at once removes this plant from the *tetragonum-Lamyi* section, while the leaf-form and general appearance are totally different.—E. Drabble. *E. montanum* L.—A. E. Wade. Luxuriant *E. montanum* L.—H. W. Pugsley. Mr. Fraser thought his fitted into *E. tetragonum* better.

Epilobium palustre L. Shapwick Peat Moor, Somerset, v.c. 6, Aug. 13, 1930. When I gathered these I had not realized the species was so widely spread in Britain.—H. S. Thompson. Yes ; the autumnal stolons end in round, pea-like rosettes, but not difficult to identify without them.—J. Fraser.

Œnothera odorata Jaeq. Railway banks on sandstone, Brislington, N. Somerset, Aug. 9, 1930. This Patagonian species has been established there over 20 years.—H. S. Thompson. Yes.—E. Drabble and J. Fraser.

Œnanthe pimpinelloides L. Pasture on Lias soil, Street, Somerset, v.c. 6, July 12, 1930. In Somerset this grows in pastures and on road sides, not usually in " marshes " or " wet places," as stated by several British authors.—H. S. Thompson.

Peucedanum palustre Mœnch. (1) Shapwick peat-moor, Somerset, Aug. 13, 1930. One or two plants amidst brush-wood were 7 feet in height. (2) Wicken Fen, Cambridge, Aug. 17, 1930.—H. S. Thompson.

Heracleum Sphondylium Linn. [B 19]. Seedlings, March and April, 1930. Fruits, Sept., 1930. From a cultivated plant in my garden at Streatham. This plant, which I brought from Warlingham about 1923, commonly attains the height of about 8 feet. The seedlings are intended to form a series showing cotyledons, and the intermediate stages between these and the mature leaves.—J. E. Lousley. Very useful.—H. S. T.

Coriandrum sativum Linn. Waste ground, Tamworth Lane, near Mitcham Common, Surrey, July 26, 1930. [Ref. B 15]. —J. E. Lousley. Yes.—E. Drabble. Yes, excellent in flower and fruit.—J. Fraser. Correctly named. This is the first specimen of this evil-smelling alien I have seen from Surrey. —H. W. Pugsley.

Caucalis arvensis Huds. Shingle, Swalecliffe, near Whitstable, East Kent, Aug. 3, 1930. [Ref. B 12].—J. E. Lousley. Yes.—E. Drabble. Undoubtedly. In fine fruit.—J. Fraser. Nice specimens of an uncommon plant that seems to be more frequent in Kent than in most British counties.—H. W. Pugsley.

Caucalis nodosa Scop. var. *pedunculata* Rouy. Seawall at mouth of R. Brue, Somerset, v.c. 6, June 19, 1930.—H. S. Thompson. I agree.—J. Fraser. Yes, but not very typical. I have gathered it at the same locality with umbels on stalks 2 cms. in length.—I. M. Roper. This gathering did not strike me as very well marked.—E. C. Wallace. I also have seen better material there !—H. S. T.

Galium boreale L. Dochart Valley, near Killin, Perthshire, July 9, 1930. Leg. K. D. Little. Comm. J. E. Little.

Galium uliginosum L. Shapwick Peatmoor, Somerset, v.c. 6, Aug. 13, 1930. A delicate form with narrower leaves, but extremely scabrous with hooked hairs. Babington was wrong in saying " turning blackish when dry," and of *palustre* " continuing green." It is *au contraire* !—H. S. Thompson. Yes ; a small, narrow-leaved form.—E. Drabble. Yes ; more common in the north than the south.—J. Fraser.

Valerianella ——— ? Arable field on chalk hill above Bratton, N. Wilts, June 21, 1930.—H. S. Thompson. I should say that this is *V. dentata* Poll., but there are few well developed fruits.—E. C. Wallace. This is *V. dentata* Poll.—H. W. Pugsley.

Scabiosa maritima L. Leas cliffs, Folkstone, E. Kent, July 23, 1906.—Miss S. Imeson. Comm. S.L.B.I. Var. *purpurea* (L.).—A. E. Wade.

Erigeron acre L. × *canadense* ? Railway side and wall near, Brislington, N. Somerset, Aug. 9, 1930. The tall example with root leaves up to $4\frac{1}{2}$ inches long and 2–3 fls. on several branches, was part of a very large plant, and *canadense* was close at hand. The shorter specimens (with heads only $\frac{1}{4}$–$\frac{1}{2}$ inch broad) grew among *acre* on a wall 100 yards distant.—
—H. S. Thompson. Yes, very convincing specimens.—E. C. Wallace. I can see no evidence of a hybrid origin in these plants, and moreover the specimens I received have their leaves very hairy all over—not " only ciliate on the borders "

as suggested by the label. On the Continent *E. acre* varies considerably in the leaf-covering, even an entirely glabrous variety being known. I should leave these under *E. acre* type. —J. E. Lousley. I now think that only the railway-side plant is the hybrid, and was more doubtful of those growing on the wall.—H. S. T.

Senecio integrifolius Clairv. var. *humilis* DC. Gallows Hill, near Beacon Hill, Ivinghoe, Bucks. C. P. Hurst, June 27, 1907. Comm. S.L.B.I. Yes, it was abundant on the Beacon in 1923.—J. Fraser. This is *S. integrifolius* (L.) Clairv., but I doubt the application of the varietal name.—H. W. Pugsley.

Centaurea obscura Jord. Grounds of Abney Court, Bourne End, Bucks, England, June 28, 1930. [Ref. B 33/3]. This meadow contained innumerable forms of the plants of this genus. The present gathering was all taken from one root to prevent a possible mixture.—J. E. Lousley. A not uncommon form of *C. obscura*, typical in habit, and shape of anthodes, but with the phyllary-appendages more deeply cut than is usual, and with narrower disk, ovate-lanceolate in form, and not roundish.—C. E. Britton.

Arnoseris minima Schw. and Kœrte. Near Fleet Pond, N. Hants, Sept. 11, 1930.—G. M. Ash, Comm. J. E. Little.

Hieracium [*cantianum* F. J. Hanb ?]. Sandy common, near Hammer Ponds, Thursley, Surrey. [Ref. B 61].—J. E. Lousley. This seems to be a form of *H. tridentatum* Fr. It is not *H. cantianum* F. J. Hanb.—H. W. Pugsley.

Hieracium umbellatum L. Oakhanger, Hants, Aug. 8, 1930. —R. J. Burdon. Yes, var. *coronopifolium* Fr.—H. W. Pugsley.

Hieracium ———. Bexley Hill, near Lodsworth, W. Sussex, Aug. 14, 1930.—R. J. Burdon. This gathering consists of fragmentary, secondary growths, worthless as herbarium specimens. The plant is probably *H. deductum* Sudre.—H. W. Pugsley.

Hieracium ———. Shady lane near Brook, Witley, Surrey, July 13, 1930. [B 44/B].—J. E. Lousley. I think *H. chlorophyllum* Jordan.—H. W. Pugsley.

Hieracium ———. Roadside bank, near crossroads, Brook, Witley, Surrey, July 13, 1930. [B 34/C].—J. E. Lousley. Eight sheets of this gathering were sent in. Of these five are

H. cantianum F. J. Hanb. ; one apparently a strong plant of *H. surrejanum* F. J. Hanb. ; one a form of *H. rigidum* Hartm. ; and one a member of the *sciaphilum* group.—H. W. Pugsley.

Lactuca virosa L. (1) Waste ground, Portishead, N. Somerset, Sept. 9, 1930. (2) Clay pit, Barnwell, Cambridge, Aug. 19, 1930.—H. S. Thompson. Correct. It is the form with the achenes hispidulous at the apex.—J. Fraser. Coste (*Fl. de France*, II, 430) summarises thus the differences between *L. Scariola* and L. *virosa* :— (1) Feuilles la plupart déviées obliquement à leur base ; achaines gris, hispides au sommet : *L. Scariola.* (2) Feuilles étalées ; achaines noirs lisses ou un peu hispidules au sommet : *L. virosa.*

The achenes of Mr. Thompson's Portishead plant are of a rather dark grey. . . . They are also slightly narrower than those of *virosa.* In hair-clothing they correspond well with Coste's " munis de cils courts au sommet," for *L. Scariola.* He adds :—" Varie à feuilles oblongues obovales ou spatulées indivisées, à bord denticulés tout autour, *L. dubia* Jord."

I suggest *L. Scariola* L. var. *dubia* (Jord.) as covering the form with entire leaves, and grey achenes hispid at the tip.—J. E. Little.

Sonchus palustris Linn. Newhythe, near Aylesford, West Kent, Aug. 24, 1930. [Ref. B 24]. Forming great thickets taller than a man, in the utmost abundance. Most of these specimens had already been cut by men clearing the Medway banks.—J. E. Lousley. Yes.—E. Drabble. Yes ; I saw it there in 1919.—J. Fraser.

Tragopogon pratense Linn. Roadside, near High Ongar, S. Essex, July 27, 1930. [Ref. B 45]. A condition in which the florets appear to have grown out into capitula. I can find no trace of galls, but fancy that a fungus is responsible for the monstrosity.—J. E. Lousley. A great curiosity. I think the development is due to a mite rather than a fungus. Other examples are Hen-and-Chickens Daisy, garden varieties of *Helenium autumnale*, and *Calendula officinalis.* In the latter the monstrosity is reproduced by seeds.—J. Fraser. An extreme form of phyllody of the floral organs. The pappus is replaced by linear foliaceous lobes, and the receptacle elongated to bear another capitulum. A teratological monstrosity not due to a fungus or gall.—I. M. Roper.

Erica cinerea L. var. *Rendlei* L. B. Hall. Parkstone, Dorset, Aug. 12, 1930. [Ref. 703]. From same plant as specimens distributed 1928 and 1929. This bush has again this year produced only bracteate heads in the place of the flowers. Members may like to have these specimens from the same plant, to see the persistent nature of the variation. Since 1926, when I first saw this plant in Dorset, I have seen it in eleven different places in the county, covering a wide area. In most of these localities there appears to be only one bush. They have been visited each year, and none has hitherto shown any alteration. On the other hand, *Erica Tetralix* L. var. *fissa* Dr., in which the corolla is deeply cut, appears to be only a temporary state. Plants which I have noted in Dorset with divided corollas have produced only normal flowers the following year. I removed one root to my garden where the first flowers developed had divided corollas, and all the subsequent ones were normal during the same season, and all were normal the following year.—L. B. Hall. This is a *lusus* and ought not to receive a varietal name. It is not a *chimaera* in the only sense (i.e. Winkler's) in which this term is used botanically.—E. Drabble.

Limonium humile Mill. Bosham Creek, W. Sussex, Aug. 13, 1904. A. O. Hume. Comm. S.L.B.I. Correct. Sometimes named *Statice rariflora* Drej. and *S. bahusiensis*, Fr.—J. Fraser. The specimen received is a fine example of *L. humile*, which in this station grows with *L. vulgare* and forms hybrids with it.—H. W. Pugsley.

Gentiana germanica Willd. Letcombe Castle, Berks., Sept. 13, 1905.—W. H. Grinling. Comm. S.L.B.I. Yes.—E. C. Wallace.

Symphytum officinale L. var. *purpureum* Pers. = *S. patens* Sibth. Hedgebottom, Stockwood Vale, Keynsham, N. Somerset, May 16 and June 7, 1930. After a century of doubt and speculation Dr. Sibthorp's elusive *patens*, represented by his specimen in the Oxford Herbarium, is determined to be (as Dr. Druce puts it) " only a rather luxuriant purple-flowered form of *S. officinale*." Bucknall, in his *Revision* of the genus, remarks that " no one has been able to recognize the ' spreading calyx ' described by Sibthorp. A possible explanation of this is that in sterile plants, which are of frequent occurrence, the calyx is wide open after the corolla

has fallen and exposes the abortive nutlets, and Sibthorp may have founded his *S. patens* on plants in this condition." —Jas. W. White. Well prepared specimens showing the mature and glossy black nutlets.—J. Fraser. Yes.—E. Drabble.

Symphytum orientale L. Cult. Derived from the garden of the late Cedric Bucknall, Clifton. May 5, 1930. A native of Eastern Europe, to be seen in most botanic gardens and worthy of wider cultivation as an ornamental plant. Its profusion of snow-white flowers in April and early May is quite attractive. It thrives and spreads on poor soils, and has become so far naturalized on railway banks and wood borders as to be numbered in the *London Catalogue*.—Jas. W. White. Yes: native of the Byzant.—J. Fraser. Yes; very nice and useful material.—E. Drabble.

Symphytum tuberosum L. Hort. Hitchin. (Root from banks of R. Findhorn, Morayshire, 1928, K. D. Little), June 1929 and 1930.—J. E. Little. The usual British form of this plant. —H. W. Pugsley.

Cuscuta europaea L. Near Guildford, Surrey, Aug. 7, 1930. —R. J. Burdon. It also occurs on *Urtica dioica* in Surrey.— J. Fraser. And on many other plants have I seen it.—E. C. Wallace.

Verbascum Lychnitis L. var. *album* Mill. North Stoke, W. Sussex, Aug. 9, 1930. [B 51].—J. E. Lousley and P. M. Hall. Comm. J. E. Lousley.

Verbascum nigrum Linn. var. *lanatum* Sond. About the foot of White Downs, Surrey, July 27, 1930.—E. C. Wallace. Yes, I think this is *V. nigrum* var. *lanatum* Sond. (var. *tomentosum* Bab.), and not *nigrum* × *Thapsus*, which is found occasionally where the two parent-plants grow together.—E. Drabble. Right. The other name for the variety is *tomentosum* Bab.—J. Fraser. This form, with leaves densely tomentose beneath and pubescent above, occurs fairly frequently with the type in North Kent and also in Surrey. It has received several names. In many English works it appears as var. *tomentosum* Bab., sometimes as var. *lanatum* Sond. It also appears to agree with var. *Alopecurus* Wirt. of Rouy (Vol. 11, 16) which has "feuilles à page inf. et sup. tomenteuses, les rad. faiblement cordées ou tronquées; poils staminaux parfois blanchâtres." I should scarcely consider the form

worthy of varietal rank.—J. E. Lousley. Nor I.—H. S. T. I eannot see that this differs from the ordinary form of the species found in Surrey.—H. W. Pugsley.

Verbascum longifolium DC. (Det. W. B. Turrill). [822]. Windmill Hill, Hitehin, Herts., Oct. 1929 and July, Sept., 1930.—J. E. Little. "The *Verbascum* is *V. longifolium* DC. non Ten., whieh Thellung and others reduee to *V. speciosum* Sehrad. I am not eompletely eonvineed that the reduction is justified."—(W. B. Turrill in litt., 1, xi, 29). *Habit*—Candelabrum-like. The fl. pieees sent are the lateral branches. The fls. are about 2.5 ems. broad, (i.e. mueh smaller than in *V. phlomoides*, whieh was suggested in B.E.C.R., 1930, 31). The long broadly laneeolate, rather acute basal leaves, and the crisped margins and aurieled bases of the middle leaves are characteristie. They are not deeurrent. The texture of the leaf also differs eonsiderably from that of *V. phlomoides*, being less floeeose.—J. E. Little. Yes.—E. Drabble. The above specimen is mueh less densely felted with stellate hairs than Tenore's Italian plant.—J. Fraser.

Veronica agrestis L. [849]. (Some show *lusus calycida*). Allotment, Highbury, Hitehin, Herts., May 3, 1930. Very dwarf plants. Leaves not very eharaeteristie.—J. E. Little. Yes, *agrestis*.—E. Drabble. Correet. A very rare plant in Surrey. I have only been able to find it spontaneous in our garden, and in some allotments about a mile away.—J. Fraser. Our Floras treat this as one of the eommonest weeds and it is reeorded for every viee-eounty in Great Britain ; but I suspeet that its abundance has been greatly exaggerated. Possibly it was formerly eommoner than at present.—H. W. Pugsley.

Veronica aquatica Bernh. ? Blagdon Lake, N. Somerset, July 17, 1930. Many plants reddish. Fls. pale pink, leaves narrow ; growing on the mud with *V. Anagallis* L. most of whose flowers were also pinkish I believe. I did not observe Mr. Williams' hybrid, but botany was a seeondary objeet that day, and I had no vaseulum.—H. S. Thompson. *V. Anagallis* L. ? My sheet eontains three speeimens, all *V. aquatica* Bernh. Mr. Thompson mentions "most of the combined gathering" as having pale pink blossoms. All those on my sheet must, I think have had them. I have as yet, seen no material whieh suggests that in Britain at least, the eolour of the flowers is not a good specifie distinetion.

It may be worth noting that I found last year, near Oxford, a second case of a barren, blue-flowered, and apparently hybrid plant, growing among a mixed growth of *V. Anagallis* and *V. aquatica*.—I. A. Williams. (1) [*V. Anagallis* L. ?] In spite of the rather unusual ' set ' of the infloreseenee-braneh es, I think this must be ealled *V. aquatica* Bernh. var. *Anagalliformis* (Boreau). (2) I eannot separate this from (1). In both sets many of the ovaries are galled, owing to the attaek of the coleopteran *Mecinus beccabungae*.—E. Drabble. I think all of these speeimens belong to *V. aquatica* Bernh., but the material is unsatisfaetory, the plants being diseased and most of the fruits galled.—H. W. Pugsley.

Euphrasia nemorosa Löhr. Field near Colgate, St. Leonard's Forest, West Sussex, Aug. 17, 1930.—E. C. Wallaee. Yes.—W. H. Pearsall. Yes.—E. Drabble. Yes, the typical form.—H. W. Pugsley.

Euphrasia nemorosa L¨hr. [892]. Near Lurgashall, W. Sussex, Aug. 11, 1930. Gathered rather early in order to show the unusually long basal leaves.—J. E. Little. Yes. —W. H. Pearsall. Yes.—E. Drabble. Yes, typical.—H. W. Pugsley. Mr. Fraser says his speeimens are var. *ciliata* Drabble.

Euphrasia nemorosa × *Pseudo-Kerneri*. Railway bank, Chipstead, Surrey, Aug. 23, 1930.—E. C. Wallaee. Det. H. W. Pugsley. Evidently correet. Mr. Pugsley has written it *E. nemorosa* var. *calcarea* × *Pseudo-Kerneri*. The stems and braneh es of *E. nemorosa* on the ehalk are short and stout. Mr. Wallaee's speeimens are 9–10 in. long and more slender. The flowers are also intermediate in size between the parents. —J. Fraser. I should say *Pseudo-Kerneri*.—E. Drabble. I think some of these speeimens are *E. Pseudo-Kerneri* Pugsl., but the majority seem to be the hybrid suggested though nearer to *E. Pseudo-Kerneri*. The influenee of *E. nemorosa* may be seen in the eoarser habit and foliage, the more aeeresceent ealyx, and the shorter and broader upper lip of the eorolla.—H. W. Pugsley.

Euphrasia curta Fries. Moor, Goathland, N.E. Yorks, v.e. 62, Sept. 19, 1930.—Ida M. Roper. Yes, f. *piccola* Townsend. —W. H. Pearsall. Yes ; small *curta*.—E. Drabble. This seems eorreetly named, although the plants are very poorly grown and only the larger individuals show any eharaeteristie features.—H. W. Pugsley.

Euphrasia gracilis Fr. (det. W. H. Pearsall). [882]. Near Killin, Perthshire, July 16, 1930.—Leg. K. D. Little. Comm. J. E. Little. *E. micrantha* Reichb.—W. H. Pearsall. Correct as previously described ; but in Pugsley's recent " Revision of the British Euphrasiae " this is now *E. micrantha* Reichb. —J. Fraser. Yes ; *E. micrantha* Reichb.—E. Drabble. Yes ; *E. micrantha* Reichb.—H. W. Pugsley.

Euphrasia ———. By pond on Whitmoor Common, Surrey, Aug. 7, 1930.—R. J. Burdon. E. *anglica* Pugsl.— W. H. Pearsall. Probably *E. anglica* Pugsl.—E. Drabble. *E. anglica* Pugsl.—H. W. Pugsley.

Euphrasia ———. Field, near Hookhams, Hillgrove, Lurgashall, W. Sussex, Aug. 2, 1930.—R. J. Burdon. Probably *E. anglica* Pugsl.—E. Drabble. Is *E. anglica* Pugsl. —H. W. Pugsley.

×*Mentha hircina* (Hull) Fraser var. *hirsuta* Fraser. Cult. Kew, from The Dour, New Aberdour, N. Aberdeen, Aug. 8, 1928. The whole plant of the variety is much more hairy than the original *M. hircina* Hull, and in the wild state the leaves are tomentose beneath.—J. Fraser.

×*Mentha verticillata* Linn. var. [*congesta* Fraser]. Ditch in lane near Hedge Court Millpond, Surrey, Aug. 28, 1927.— E. C. Wallace. See Report B.E.C., 1928, for comment by J. Fraser. Correctly named so far as my original descriptions are concerned, but by the time I had collected eighteen sheets from different places I found that all of them fitted into *M. verticillata* var. *paludosa* Sole. The latter's figure in *Menthae Britannicae*, Pl. 22, shows a subspicate inflorescence, but the plant rarely does this even in the same spot, and never in hedges nor the garden. I corrected this in the Report for 1928, p. 809. The description is much as in the original with some extra explanations.—J. Fraser.

×*Mentha rubra* Huds. By pond on Coxe's Green, near Chobham, Surrey, Sept. 7, 1930. A form with very rounded bracts. [Ref. B 35].—J. E. Lousley. Hudson's name is older than Smith's, but Hudson said " caulibus diffusis," whereas the stems of *M. rubra* are erect, and this introduces an element of doubt. On the other hand he may have been right, and his plant the victim of an accident. Briquet named it *M. rubra* var. *laevifolia*, that is, smooth leaved, but that is the type described by Smith. The rounded bracts are those of typical *M. rubra*.—J. Fraser.

Mentha arvensis Linn. forma. Banks of stream near Houghton Bridge, Amberley, West Sussex, Aug. 9, 1930. [Ref. B 30].—J. E. Lousley. Correctly named. These large specimens are sometimes mistaken for *M. sativa*, but the short calyx teeth determine *M. arvensis*. The thinly hairy state is due to ample moisture.—J. Fraser.

Mentha arvensis L. var. *agrestis* (Sole). Cheverell's Farm, Botley Hill, Surrey, Sept. 2, 1929. The principal features of this Mint are the sub-rotund, shortly stalked, very hairy leaves, that are much wrinkled before pressure in drying.—J. Fraser.

Marrubium vulgare Linn. Sandhills at New Romney Warren, East Kent, July 11, 1930.—E. C. Wallace. A plant that seems to like the manure of rabbits and other animals, judging by its usual habitats.—J. Fraser. I have seen this plant about rabbit holes in Surrey, Somerset, Worcestershire and at Romney Warren in Kent.—E. C. Wallace.

Polygonum viviparum L. Wineh Bridge, Teesdale, Durham, June 3, 1903.—A. O. Hume. Comm. S.L.B.I.

Thesium humifusum DC. (1) Chalk hill, above Bratton, N. Wilts., June 21, 1930.—H. S. Thompson. (2) Chalky turf on the Sheep Leas, Horsley, Surrey, July 27, 1930.—E. C. Wallace.

Euphorbia hiberna L. East Lyn Valley, N. Devon, July 8, 1930.—H. W. Pugsley.

Betula alba L. and *B. pubescens* Ehrh. ? for confirmation. Sharpham Peat Moor, N. Somerset, June 14, 1930. Several old trees of the former, with large leaves irregularly serrate, grow at the border of a field by the rough road.—H. S. Thompson. Seems to me to be *B. pubescens* var. *glabrata* Wahl. The young shoots and leaves are pubescent, the old ones are glabrous in both cases. The bracts of the ♀ catkins have the side lobes erect.—J. Fraser.

Salix cinerea × *viminalis* f. *ferruginea* G. Anders. [Ref. 441]. Chevingum Farm, Godstone, Surrey. The very short and thin pubescence, turning rather rusty in autumn, or after being dried some years, I attribute to *S. cinerea*. Wimmer quotes an English specimen of *S. ferruginea* G. Anders. under *S. cinerea* × *viminalis*.—J. Fraser.

Ceratophyllum demersum Linn. Specimens in flower from Dorking Millpond, Surrey, July 21, 1929. Gathered in the company of the late C. E. Salmon who remarked at the time that he had never seen this plant fruiting in the Millpond. No fruits were seen when I visited the pond some two months later.—E. C. Wallace. Yes.—W. H. Pearsall. Yes.—H. S. Thompson. Correct; the leaves are only once or twice forked.—J. Fraser. Correct; no fruit, but it can be distinguished by the four segments of the bifurcate leaf.—I. M. Roper. Correct; good specimens but without ripe fruit.—H. W. Pugsley.

Ornithogalum pyrenaicum Linn. Trindledown Copse, near Froxfield, Wiltshire, July 5, 1912.—C. P. Hurst. Comm. S.L.B.I.

Juncus triglumis L. Perthshire (1 specn. Argyll.)—W. A. Shoolbred. Comm. Nat. Mus. of Wales.

Typha angustifolia L. Marsh ditches about New Romney, E. Kent, July 10, 1930.—E. C. Wallace. Yes, good examples of this.—W. H. Pearsall (and others).

Damasonium Alisma Mill. Pond near Guildford, Surrey, Aug. 7, 1930.—R. J. Burdon. Presumably from Briton's Pond, Stringers Common. This plant is getting scarce in Surrey.—E. C. Wallace.

Potamogeton coloratus Hornem. Ditch on Ken Moor, N. Somerset, Sept. 10, 1930.—H. J. Gibbons and J. W. White. The habit of this pondweed is variable, leaning sometimes towards *P. lucens* or to *P. alpinus*.—J. W. White. Correctly named. As many of the upper leaves are 80–85 mm. × 30 mm. they would come under Hagström's f. *grandifolius*. Irish examples (Portarlington, July, 1896, R. L. Praeger) possess leaves 95 × 56 mm., and the English fens often produce even longer leaves, up to 150 mm. As a general rule the apex of the leaves of this species shows little pointing, but occasionally, as in these specimens, some of the upper leaves are markedly cuspidate.—W. H. Pearsall. ,

Potamogeton alpinus Balb. var. *Palmeri* Druce. In deep water under a small bridge over the Basingstoke Canal, near Odiham, N. Hants, Sept. 13, 1930.—E. C. Wallace. These fine specimens are very acceptable. They are un-

questionably *P. alpinus* var. *Palmeri* Druce and not a hybrid, as suggested in *L. C.* 1925. The late Arth. Bennett admitted this later, *in litt.* 1928.—W. H. Pearsall.

Potamogeton heterophyllus Schreb. In the Basingstoke Canal, near Byfleet, Surrey, Sept. 14, 1930. In shallow water close to the banks. Fruiting specimens scarce and poor.—E. C. Wallace. These are *P. gramineus* L. var. *lacustris* Fries. The plants have been growing in relatively shallow water and therefore do not show the characteristic dense mass of vegetation at the base of stems growing in deeper water. They possess, however, excellent examples of the floating-leaves of this species.—W. H. Pearsall.

Potamogeton [*varians* Fryer]. Witcham Medlands, Cambs., Sept. 9, 1909.—E. W. Hunnybun. Comm., Nat. Mus Wales. The sheet submitted is a slender short-leaved form of *P. gramineus* L. included under var. *lacustris* Fries. It exhibits no character not included among those of that species and, moreover, possesses all the essential features of *P. gramineus*, all submerged leaves sessile, linear-lanceolate with narrowly tapered lanceolate bases neither rounded nor cordate, serrulate margins, sharply pointed apex and normal venation. In addition, it shows the well-formed typical fruits of that species. The name *varians* Fryer is invalid as it represents more than one form. The great majority of plants so labelled are undoubtedly forms of *P. gramineus*, and the late Mr. A. Bennett, recognising this, omitted the name from the latest (1925) *L. C.* list. There are, however, a few sheets still in existence, bearing the label *P. varians* Fryer, which are hybrids of *P. gramineus* and some other species.—W. H. Pearsall.

Potamogeton perfoliatus Linn. Kennet and Avon Canal, near Great Bedwyn, Wilts., Aug. 24, 1930.—E. C. Wallace. Typical examples of *P. perfoliatus* var. *ovatifolius* Wallr.—W. H. Pearsall.

Potamogeton interruptus Kit. Brackish pool, near Cuckmere Haven, E. Sussex, Aug. 10, 1930. [Ref. B 2].—J. E. Lousley. The correct citation for these fine examples is *P. pectinatus* L. var. *diffusus* Hagstr. f. *interruptus* (Kit.) Asch. This plant was originally described as a species by P. Kitaibel in Schultes, *Österr. Fl.* 1814, 328. Babington (*Man.* ed. 3, 1851, 343) still regarded it as such and named it *P. flabellatus*. In 1864,

however, Aseherson (*Fl. Prov. Brand.* 1864, 666) reduced it to a variety: *P. pectinatus* var. *interruptus* (Kit.) Asch., and it has rightly been regarded as a form of *P. pectinatus* by German and Swedish authorities sinee that date. Dr. Hagström's masterly treatment of the innumerable forms of *P. pectinatus* (*Crit. Researches*, Stoekholm, 1916), shows eonelusively that all these are ineluded under one or other of his 2 varieties—*ungulatus* and *diffusus*. Most British forms belong to the latter. In Mr. Lousley's sheet the very important wider lower leaves are admirably displayed, and the plant amply justifies its label.—W. H. Pearsall.

Naias graminea Delile var. *Delilei* (Magnus). Lanes.—G. Whitehead and J. A. Wheldon, Aug, 1891 and 1893.—Comm. Nat. Mus. of Wales.

Eriocaulon septangulare With. Roundstone, Co. Galway, Aug., 1868.—Chas. Bailey. Comm. Nat. Mus. of Wales.

Scirpus filiformis Savi var. *monostachys* Clarke and Marshall. Moor Marsh, below Penrhosligwy Chureh, Anglesey, Sept. 25, 1905.—A. O. Hume. Comm. S.L.B.I. There are several stems with more than one head in my sheet.—I. A. Williams. Of *S. Savii* Seb. and Maur. (a synonym), Coste says "épillets . . . . solitaires, rarement geminés," so that he finds the solitary spikelet the more usual in Franee. Among my sheets, plants with a single spikelet oceur from four plaees in three S.W. counties and from Guernsey; and with two spikelets only from W. Cornwall.—J. E. Little. Yes, the eommoner form of this submaritime speeies. I found two good fruiting speeimens of *Ruppia rostellata* entangled in the *Scirpus* sent me.—H. S. Thompson.

Rynchospora fusca Ait. Bog behind "The Moat," Thursley Common, Surrey, July 23, 1930. [Ref. B 7]. This plant is here very plentiful but restricted to patches of peat, very moist, but free of almost all other vegetation. It was diseovered here, I believe, by the Rev. E. S. Marshall.—J. E. Lousley.

Schoenus ferrugineus L. N.W. shore of Loch Tummel, Mid Perth, v.c. 88, 1913.—W. A. Shoolbred. Comm. Nat. Mus. of Wales.

Kobresia bipartita Dalla Torre. Ben Laoigh, Mid Perth., Aug., 1893.—W. A. Shoolbred. Comm. Nat. Mus. of Wales.

Carex rupestris All. Corrie Cander, S. Aberdeen, July, 1906.—W. A. Shoolbred. Comm. Nat. Mus. of Wales.

Carex vulpina L. var. *interrupta* Peterm. Border of Nailsea Ponds, N. Somerset, June 28, 1930. Plants were gathered from the same clump in July, 1915, and sent to Mr. Arthur Bennett, who named them *C. muricata* L. and added, "I quite think it may come under the var. *altissima* Aseh. and Graeb. =*C. altissima* Schur., but I have seen no specimens, so cannot say definitely that it may be so named." E. S. Marshal wrote in Oet., 1915., "The leaves are mueh too broad for *C. muricata* auet. angl. (*C. contigua* Hoppe); the habit and the fruit appear to me to be deeidedly in favour of *C. vulpina*. The perigyna are *distinctly* (not obseurely) veined. Your speeimens seem to answer fairly well to the deseription in Asch. and Graeb. Synopsis Vol. II, pt. 2, p. 37, of *C. vulpina* L. var. *interrupta* Peterm. Spikes interrupted, glumes whitish, palish brown on the margin. They say that this is rare. I have a very similar plant from Cofton, S. Devon."—Ida M. Roper. This seems a good variety. . . . . Another with the bracts longer than usual has been named *C. nemorosa* Lumn.—J. Fraser. I think this belongs to the typical speeies.—H. W. Pugsley. I should not eonsider *interrupta* (or even the shade-form *nemorosa*) a really good variety of this very variable Sedge, and in my experienee interrupted forms are not "rare." In Somerset I have seen it frequently, and have good examples from a roadside near Pill, N. Som., 1916.—H. S. Thompson.

It is diffieult to imagine that Ar. Bennett eould or would have placed the present plant under *C. muricata* aggr. The weak eompressible triquetrous stems, the broad leaves, and long posterior attaehment of the ligule (14 mm.) are those of *C. vulpina*, as well as the charaeters of the fruit mentioned by Marshall. Mr. Barton (W.E.C.R. 1917, 78) distributed as *C. vulpina* var. *nemorosa* Lej., a similar plant with lowest spikelet distant about twice its own length from the next above. For it Mr. Bennett queried var. *interrupta* Peterm. R. S. Adamson distributed as *C. vulpina* var. *nemorosa* Lej. (B.E.C.R. 1912, 293), another sheet whieh resembles the preeeding, and has fuseous not pallid glumes.—J. E. Little.

Carex ———. Swamp on Denge Beaeh, East Kent. July 9, 1930. The fruits are apparently abnormal through being galled.—E. C. Wallaee. Apparently luxuriant *C. arenaria*,

I believe that the curious appearance of this Carex is due to gall influence, having in mind a gall described by Connold (*Plant Galls of Britain*, 1909, 90) on *Carex vulpina*, where "sixteen galled "leaflets" (glumes) are clustered in a cone-like mass. Each "leaflet" contains but one larva, which pupates in the gall." The gall-producer is unknown. The spikes of Mr. Wallace's plant are similar.—J. E. Lousley. Is *C. disticha* Huds. with unusually large and strongly ribbed perigynia.—H. W. Pugsley. This is *C. disticha* Huds., as is shown by the utricles, which lack the broad wing of *C. arenaria* on the upper two-thirds. Of *C. disticha*, Butcher ("Further Illustrations") remarks :–"Often with large abortive utricles." In the present plant some utricles measure 6 mms., the normal being 5 mm. Is this due to a gall? Perhaps Mr. E. W. Swanton, Haslemere, could say. A similar deformation may sometimes be seen in *C. vulpina*.—J. E. Little.

I agree with Mr. Little, the utricles lack the broad wing of *arenaria*; though I had told Mr. Wallace it was a very tall form of *arenaria*.—H. S. Thompson.

Later.—Mr. Little sent the plant to Mr. G. M. Ash, asking him to show it to Mr. Swanton of the Haslemere Museum. Mr. Ash agrees that it is *C. disticha*, and reported that "The fruits are attacked by a fly, species unknown. Similar galling of fruits of *C. vulpina* is said to be caused by *Perrisia muricatae* Meade," and adds, "Mr. Swanton found a grub, orange in colour, in each fruit he opened. I consulted his French book on Galls, and notice that the fly *Perrisia muricatae* (as we might expect from the name) attacks *C. muricata*, as well as *C. vulpina*; and Mr. Swanton thinks it quite possible that *C. disticha* is attacked by the same fly."—G. M. Ash.

Carex Leersii F. Schultz (*C. pseudo-divulsa* Syme). Lane near Axbridge, N. Somerset, July 2, 1930.—H. S. Thompson. The utricle exceeds the glume, and is narrowed at the base; the nut is 3 mm. long and 1.5 mm. broad. Do not these characters indicate *C. divulsa*? "*Nux quadrata*" is an important character for *C. Leersii*.—J. E. Little. Both plants grow in that lane, but I was uncertain of this gathering. —H. S. T. Probably correctly named, but the specimens, although quite young, appear to have withered before they were collected.—H. W. Pugsley.

Carex Lachenalii Schkuhr. Corrie Sneachda, Cairngorm, Aug. 8, 1898; and Lochnagar, S. Aberdeen, July 21, 1906.

—W. A. Shoolbred. Comm. Nat. Mus. of Wales. Yes.—J. Fraser.

Carex digitata L. Wyndcliff, Mon., 1896 and 1904.—A. Ley and W. A. Shoolbred. Comm. Nat. Mus. of Wales.

Carex ornithopoda Willd. Cressbrook Dale, Derbyshire, 1876 and 1898.—E. F. Linton and T. Rogers. Comm. Nat. Mus. of Wales.

Carex montana L. Wyndcliff, Monmouth, April 12, 1904.—A. Ley. Comm. Nat. Mus. of Wales.

Carex lepidocarpa Tausch. ? " Peplis " pond, E. of Blackdown, Mendip, at 1,000 feet, N. Somerset, June 17, 1930.—H. S. Thompson. This is the commonest form of the *flava*-group in Britain, and is the *C. flava* var. *minor* of Townsend, which is identified with *C. Œderi* var. *œdocarpa* Anderss. According to L. H. Bailey (vide *Journ. Bot.* xxvii, 332, 1889), this plant is the typical *C. Œderi* Retz., while the form that most recent European botanists regard as that species is *C. Œderi* var. *cyperoides* Marsson. The plant now contributed appears to me more closely connected with *C. flava* L. than with what we in Britain understand as true *C. Œderi*. *C. lepidocarpa* Tausch is a taller, narrow-leaved plant with deflexed beaks to its larger perigynia.—H. W. Pugsley.

Ascherson and Graebner remark: " However different dwarf forms of *C. Œderi* appear from the well-developed examples of *C. flava* (*vulgaris* segr.) which have utricles twice as large, it is nevertheless impossible to find salient characters for the differentiation of two or even three species. The direction of the beak is quite inconstant."

Ascherson and Graebner make no mention of *C. flava* var. *minor* Towns. (*C. œdocarpa* Anderss.) and their description of *C. lepidocarpa* has :—" The lowest female spikelet often very remote, below the middle of the stem." According to their arrangement Mr. Thompson's plant might therefore come under *C. lepidocarpa*. But according to Townsend's arrangement I believe the shorter stem (which is decumbent ascending), the smaller utricles (3 mm.) with short beak (1 mm.) and sometimes remote lower spikelet would bring it under var. *minor*. Kükenthal's description of var. *œdocarpa* has :—" Spiculæ ♂ pedunculatæ, ♀ ± remotæ. Bracteæ sæpe erecto-patentes. Utriculi longius [quam in *C. Œderi*] rostrati."—J. E. Little.

C. Œderi Retz. var. *cyperoides* Marss. Shapwick Peat Moor, Somerset, v.c. 6, Aug. 13, 1930. Abundant and somewhat variable in form.—H. S. Thompson. This may be correct, but I see no apparent difference from Mr. Thompson's var. *oedocarpa* from Ashcott Peat Moor, see Rept. 1929–30. Husnot says that var. *cyperoides* is a dwarf variety but does not describe var. *oedocarpa*. My own notes distinguish var. *cyperoides* from var. *oedocarpa* by its smaller very shortly beaked fruit, with which this specimen hardly agrees.—A. H. Wolley-Dod. This plant, which was distributed from this station in 1921, is the *C. Œderi* of most later European authors, and is var. *cyperoides* Marsson according to Bailey (see note above). But Marsson's variety *cyperoides* is a broad-leaved form, and I think this gathering is nearer *C. Œderi* var. *elatior* Anderss. although perhaps insufficiently well marked for varietal distinction.—H. W. Pugsley. So Mr. Pearsall thought, and in kindly returning his sheet, he pointed out that there were two different plants on it, differing somewhat in the shape and size of the nut and beak; the other being, he thought, a form of *C. flava*.—H. S. T.

Carex riparia Curt. var. *gracilis* Coss. and Germ. Marsh ditch, Tickenham, North Somerset, June 19, 1930.—Jas. W. White. Well marked specimens of the variety.—H. W. Pugsley. This is remarkable for its narrow leaves, and the great length of the peduncle of the lowest ♀ spike (16in.), and differs in this respect from a previous gathering by Mr. White, where the peduncle is normal.—J. Fraser.

Deyeuxia neglecta P. Beauv. Oakmere, Cheshire, July 5, 1906.—A. O. Hume. Comm. S.L.B.I. *Calamagrostis neglecta* P. Beauv. I agree.—J. Fraser. I believe this is the plant which Dr. Druce calls *C. neglecta* (Ehrh.) Beauv. var. *borealis* (Laest).—J. E. Lousley.

Cynodon Dactylon Pers. Studland Bay, Dorset, July 21, 1887.—J. W. White. The Doab grass of which they make lawns in the tropics by chopping up the creeping stems.—J. Fraser.

Molinia cœrulea Mœnch var. *robusta* (Prahl) = *major* Roth. Shapwick Peat Moor, Somerset, Aug. 6, 1930. One is inclined to agree with J. W. White when he says " a variation, however, that seems to be mainly vegetative."—H. S. Thompson.

Bromus commutatus Schrad. ? Border of new road, Street, Somerset, July 13, 1930. Though the panicles are mostly *simple*, some have two spikelets, and the one that has three spikelets has also three stems from the same lowest node. —H. S. Thompson. Yes ; the form with hairy spikelets, which is, I imagine, the variety *pubescens* Watson.—I. A. Williams.

Bromus britannicus I. A. Williams. Origin near Lymington, Hants, 1929. Sown 18–8–29. Taken 24–6–30. Hort, Parkstone, Dorset. Grown in sandy peat. These plants retained all the characters of the species under varied conditions of soil and lighting. The only result of better conditions was the production of much larger and more branched panicles.—L. B. Hall. See *Journ. Bot.*, 1931, p. 57.—E. C. Wallace.

Brachypodium pinnatum Beauv. var. *pubescens* Gray. Hackhurst Downs, Surrey, July 27, 1930. These specimens are not very extreme, but I think they justify the name given.—E. C. Wallace. Yes, with unusually short spikelets. —E. Drabble. Correct, but not extreme.—J. Fraser. Yes, and much better examples than many distributed under this name. All the spikelets are pubescent, and not a few only as is sometimes the case ; both the outer and inner pales are markedly so, especially on the margins. The awns vary in length, even in the same spikelet, but are always shorter than their pales and strongly pubescent.—W. H. Pearsall. Are the spikelets sufficiently pubescent for the var. ? The plant is variable, and even in the same patch one can find degrees of pubescence, and spikelets straight like the type or curved like the form *corniculatum*. The var. *pubescens* from Malvern, A. J. Crosfield (Report 1912, 416), passed by Bennett and Salmon, has much more *pubescent* spikelets.—J. E. Little.

Agropyron junceum Beauv. St. Helen's Spit, Isle of Wight, June 21, 1930. [Ref. B 11].—J. E. Lousley. Correct.—J. Fraser.

Lastrea aemula Braekenridge. Woodabay, N. Devon, July 17, 1930.—H. W. Pugsley.

Phegopteris Robertiana Braun. Goblin Combe, N. Somerset, Aug. 6, 1930.—H. S. Thompson.

Lycopodium clavatum L. Below Postbridge, Dartmoor, Devon, June 23, 1902.—A. O. Hume. Comm. S.L.B.I.

Lycopodium alpinum L. Summit of Cronkley Fell, Teesdale, Durham, July 13, 1903.—A. O. Hume. Comm. S.L.B.I.

Chara polyacantha Braun. Walton Moor, N. Somerset, Sept. 10, 1903.—J. W. White.

Chara ———. Brackish pool, near Newhaven, East Sussex, Aug. 10, 1930. [Ref. B 40].—J. E. Lousley and P. M. Hall. *C. vulgaris* L. The variation, within comparatively narrow limits, of this species seems endless. More than 70 varieties and forms have been named. Canon Bullock-Webster and I, in "British Charophyta," thought it desirable to restrict the use of names to the extreme forms. The present plant would come under our var. *refracta* (*C. refracta* Kütz.).—J. Groves.

SUBSCRIPTIONS, 1930.

	s.	*d.*
Ash, G. M.	10	6
Barton, W. C.	10	6
Bergens Museum	10	6
Bickham, S. H.	10	6
Biddiscombe, W.	10	6
Bishop, E. B.	10	6
Botanical Dept. British Museum	10	6
Botany School, Cambridge	10	6
Burdon, Preb. R. J. ...	10	6
Carr, Prof. J. W.	10	6
Catcheside, D. G.	10	6
Comber, J.	10	6
Crosfield, A. J.	10	6
Dickinson, Miss	10	6
Druce, F.	10	6
Evans, A. H.	10	6
Ewing, Mrs.	10	6
Fraser, J.	10	6
Geldart, Miss A. M. ...	10	6
Goode, G.	10	6
Gray, Dr. H.	10	6
Gregor, Rev. A. G. ...	10	6
Hall, L. B.	10	6
Hanbury, F. J.	10	6
Howarth, W. O.....	10	6
Little, J. E.	10	6
Lousley, J. E.	10	6
Martin, Rev. W. K. ...	10	6
Matthews, Prof. J. R.	10	6
National Museum of Wales	10	6
National Museum, Dublin	10	6
O'Loughlin, J. L. N....	10	6
Pearsall, W. H.	10	6
Pugsley, H. W.	10	6
Ransom, F.....	10	6
Rilstone, F.	10	6
Roper, Miss I. M.	10	6
Salmon, C. E. (the late)	10	6
Simpson, N. D.	10	6
Skene, Dr. M.	10	6
Smith, Prof. W. W. ...	10	6
S. London Bot. Inst ...	10	6
Thompson, H. S.	10	6
Thurston, E.	10	6
Wallace, E. C.	10	6
White, J. W.	10	6
Williams, I. A.	10	6
Wolley-Dod, Lt.-Col. A. H.	10	6
	£25	4 0

TREASURER'S BALANCE SHEET, 1930.

Receipts.	£	s.	d.
Balance in hand, December 31st, 1929 ...	4	17	1
Subscriptions for 1930	25	4	0
Reports sold		16	6
	£30	17	7

Expenditure.	£	s.	d.	£	s.	d.
Printing—						
Forty-sixth Annual Report (200 copies) 48 pages and wrapper, with insertion of two plates ...	26	0	0			
200 copies of the portrait of the late A. Bennett ...		18	6			
Card and postage		11	0			
				27	9	6
Working Expenses—						
Distributor	1	13	0			
Secretary : Envelopes and postage of Reports ...		14	0			
,, Part ordinary postage		10	6			
				2	17	6
Balance in hand, December 31st, 1930 ...					10	7
				£30	17	7

G. GOODE.
Hon. Treasurer.

31*st December*, 1930.

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Iolo A. Williams, B.A., F.L.S., 10, Mulberry Walk, Chelsea, S.W.3.
Lt.-Col. A. H. Wolley-Dod, Berkeley Cottage, Mayfield, Sussex.

HONORARY MEMBER.

James Groves, F.L.S., Trevarthian, Freshwater Bay, Isle of Wight.

N.B.—Our new Swiss member, Dr. Walo Koch of Zürich, wishes to exchange some of our West European and maritime plants, also eritical genera (other than *Rosa*, *Rubus* and *Hieracium*) for Swiss plants of eritical genera.

BRIT. MUS. (N.H.)
BOTANY

Vol. IV., No. 3.

THE

FORTY-EIGHTH ANNUAL REPORT

OF THE

WATSON
Botanical Exchange Club

1931—32.

Referees:

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Rev. H. J. RIDDELSDELL, M.A., A.L.S., Bloxham, Banbury.

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Hon. Secretary and Editor:

H. STUART THOMPSON, A.L.S., 11, Buckingham Place, Clifton, Bristol.

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1932.

THE WATSON

Botanical Exchange Club

REPORT FOR 1931—1932

List of Contributors.

	Sheets		Sheets
G. M. Ash ...	... 9	W. H. Pearsall	... 18
S. H. Bickham	... 14	H. W. Pugsley	... 69
W. Biddiscombe	... 34	F. Rilstone ...	... 31
R. J. Burdon ...	... 99	Miss I. M. Roper	... 86
J. W. Carr ...	... 78	H. S. Thompson	... 814
J. Fraser ...	... 96	E. C. Wallace ...	... 292
G. Goode ...	... 22	J. W. White ...	... 148
L. B. Hall ...	... 8	I. A. Williams	... 32
Dr. Koch ...	... 269	Lt.-Col. A. H. Wolley-Dod ...	... 42
J. E. Little ...	... 188		
J. E. Lousley	... 295	Total	2685
Nat. Mus. of Wales	... 41		

Seed packets : J. E. Little, 86.

Owing mainly to the Secretary's magnificent contribution the total number of 2685 sheets sent in this year is the largest since the distribution of 1926–27. There were no "scraps," and with few exceptions the plants were well selected and carefully dried. Some, including the Swiss plants sent by Dr. Koch, were very beautiful, really models of what herbarium specimens should be. Amongst the plants were a number of most interesting species, varieties and hybrids, but none that the most ardent lovers of our native flora could say ought not to be gathered on account of their rarity. All members who acknowledged the receipt of their parcels were much pleased with the many interesting plants sent to them. Pansies, Willow Herbs and Pondweeds were amongst those well represented, but the following important Families and Genera : *Cruciferae*, *Viola* (Violets), *Rubus*, *Rosa*, *Saxifraga*, *Centaurea*, *Hieracium*, *Melampyrum*, *Plantago*, *Chenopodiaceae*,

Polygonaceae, *Salicaceae*, *Juncus*, *Carex*, *Filices* and *Charophyta* were represented but sparingly or not at all. It might be desirable for members to concentrate a little more on these, and on some of the many hybrids that occur in the various genera.

I much regret to have to remind some members once again that there is room for improvement in their labels. What I should like to impress upon members is that most of the collections of plants now being made will, or certainly ought to find a home eventually in some public herbarium, and that they would not like to see their own plants there badly labelled. Another point requiring attention is to avoid sending the plants on sheets of paper that are much larger than is required. It takes some time to cut these papers down to the size necessary to send the return parcels to those members who adhere strictly to the rules, and it is not fair to put this extra burden upon the distributor, whose task, under the best circumstances, is not a light one. A copy of the Rules would with pleasure be sent to those members who do not possess one, if application is made to the Treasurer (or Secretary).

To our general Referees, and to Messrs. E. G. Baker, J. Fraser, W. O. Howarth, J. E. Little, J. E. Lousley, W. H. Pearsall, H. S. Thompson, A. E. Wade, A. J. Wilmott, and Lt.-Col. A. H. Wolley-Dod, we tender most grateful thanks for their many interesting and valuable notes.

G. GOODE,
Distributor, 1931–32.

The Club is greatly indebted to Mr. Goode, our Treasurer, for having carried out in so thorough a manner the arduous duties of Distributor. It may be difficult for those who have not had such an experience to appreciate the immense amount of work this sometimes entails. I would also personally thank him for lessening my own labours. If his health permits, Mr. Goode hopes to distribute again next winter, and parcels should be sent to him by December 1.

By carefully reading Mr. Goode's comments on untidy or illegible labels, incidentally the future work of both Distributor and Editor might be greatly lessened. It is hardly necessary to add that untidy sheets of large newspaper are already

frequent enough in most places ! I would venture to ask more members to kindly send a copy of their labels (*written with the data in the approximate order long since adopted in the Reports*) on a 4to sheet or piece of foolscap, with a line left between each entry, preferably to sending a duplicate label.

My thanks are due to Dr. Drabble and Mr. Pugsley, for reading the proofs, and for their examination of so many plants.

We much regret that Mr. Barton felt obliged to resign his membership, and would thank him for all his past help.

As Secretary I have received several enquiries from California and elsewhere in regard to exchange of specimens ; but it is thought inadvisable to extend our activities beyond Europe. Some of Dr. Koch's beautifully prepared Swiss specimens, including several of great interest or rarity, have been much appreciated, even by some members who normally do not collect Continental plants.

H. S. THOMPSON,
Hon. Sec. and Ed.

May 18, 1932.

Albert John Crosfield (1852–1931).

We regret to record the death on August 6, 1931, of Mr. A. J. Crosfield, at his residence on the Madingley Road, Cambridge. Since 1890 he was a frequent contributor to the Club of small parcels of plants, right up to 1930.

He was born at Liverpool in 1852, and his mother was Elizabeth, daughter of the first James Backhouse, the Quaker Missionary and traveller in Norway and the Antipodes, and founder of the famous York nurseries. In 1880 Crosfield married Miss Gulielma Wallis of Reading, and the late Anthony Wallis was one of their nephews. (*Journ. Bot.* 1919, 347).

In a long appreciation (with excellent portrait) in *The Friend*, Aug. 21, 1931, we read that even before Crosfield went to Bootham School, York, he was an enthusiastic naturalist, and that birds and flowers were his chief interest. During the last few years he had contributed several readable articles to that weekly journal on the plants observed during some of his later visits to N. Wales and Worcestershire.

Early in life A. J. Crosfield threw himself into active religious, Temperance and Adult School work ; and for fifty years was closely associated with the Friends' Foreign Mission Association, of which Board he was chairman from 1911 to 1920 ; and he twice went to India. He also visited China

and America, and took part in the starting of a West China Christian University.

" He always thought the best of people . . . . . there was in him a certain goodness that seemed to spring from his very nature ; and above all he was transparently sincere."

He was interred in the Friends' burial ground at Reigate ; and for many years he and his nephew Anthony were two of the chief friends of the late C. E. Salmon.—H. S. T.

Eliza Standerwick Gregory (1840–1932).

Mrs. Gregory, *née* Barnes, was born at Thrapton, Northants, and when two years old moved with her parents to Trowbridge, Wilts, where from early childhood she was fondly interested in flowers, and quite soon became helpful to other youthful botanists. In 1863 she married Mr. Arthur Gregory of that town. The family moved to Weston-super-Mare in 1885, and in 1887 Mrs. Gregory founded a school for boys, with the help of her daughter and elder son. Field botany and natural history were a feature of the education. Her younger son, the late Reginald P. Gregory, afterwards Lecturer in Botany at the University of Cambridge, was one of the boys at the school in the beginning.

In 1904 Mr. and Mrs. Gregory moved to Cambridge. In Somerset and elsewhere she had become much interested in Violets, and this was specially developed at Cambridge, where a plot in the Botanical Gardens was allotted to her, in which she was able to grow and study the life-history of specimens received from England and the Continent. Her well illustrated monograph on " British Violets," for which the late G. C. Druce wrote an interesting Introduction, was published in 1912. Between 1904 and 1923 four of her articles and notes on Violets appeared in the *Journal of Botany*.

Mrs. Gregory examined for many years the Violets contributed to both the Exchange Clubs, her last note appearing in this publication so recently as 1929, when a very aged lady. She was a member of this Club for about 28 years, until 1919, but she only rarely contributed a few specimens. When in 1919 she left Cambridge to return to Weston-super-Mare, Mrs. Gregory presented her herbarium to the British Museum (Nat. Hist.). She died aged 91, at Weston-super-Mare, March 22, 1932, and was buried in the town cemetery.

Most of the above is taken from a notice by the present writer in *Journ. Bot.*, May, 1932.—H.S.T.

John Comber (1869–1930).

Unfortunately the sad news of the death of Mr. John Comber, August 21, 1930, did not reach us until after last year's Report was published. He joined the Club in 1911, and continued each year until 1916 to contribute good parcels of plants, the average being 210 sheets. Latterly he lived at Guildford. He was a well-known archæologist.

Notes on Last Report.

P. 68.—*Rosa canina* var. *latebrosa* (Déségl.). In so weak a form as this it may quite easily happen that some branches show no aciculos, and the deficiency may be greater in some years than others. It is a case where careful selection of specimens for distribution is necessary.—A. H. W.-D.

R. dumetorum var. *incerta* (Déségl.). This was a very weak form and individual specimens showed no hispidity on the pedunculos. Such specimens taken alone might easily be referred to var. *semiglabra*, and it would have been wiser to have eliminated them before the distribution.—A. H. W.-D.

P. 69.—*R. tomentella* Lem. var. *Borreri* ×. The collection was all a form of *R. obtusifolia* var. *Borreri*, not a hybrid. Whether individual sheets might have been labelled var. *decipiens* is mainly a question of the size of their leaflets.—A. H. W.-D.

P. 70.—*Rosa* ———. Bank of Tweed, near Ashiestiel, Selkirk, July 5, 1930.—R. J. Burdon. I sent this to Dr. Keller who says: "Moi aussi je crois que cette forme est hybride de *R. tomentosa* Sm., peutêtre avec une *R. rubiginosa*. Il faut connaître les rosiers de la voisinage." It is almost certainly a hybrid, and though it has little appearance of *R. rubiginosa*, its intense subfoliar glandular leaflets and their compound biserration lend colour to Keller's suggestion. The evidence is hardly strong enough to establish this new hybrid as a certainty for Britain.—A. H. W.-D.

P. 71.—*R. micrantha* Sm. var. *hystrix* Baker. Mr. Fraser is quite right. There is a little hispidity on the styles, which I had overlooked, so it is *R. rubiginosa* var. *typica*. The record for var. *septicola* must therefore be cancelled. That is a variety which bears considerable resemblance to a *rubiginosa*

variety and very slight hispidity on the styles is sometimes seen in *micrantha* forms, which is the only excuse I can offer for the mistake.—A. H. W.-D.

Correction to the Last Report.

P. 56, line 9.—For *divisa* read *divulsa*.

Thalictrum dunense auct. angl. =*arenarium* Butcher ? Common on the sea-coast sand-dunes at Redcar, N.E. Yorks, v.c. 62, August 15, 1931.—J. W. Carr. This is *T. minus* L. sensu strieto ; *T. arenarium* Butcher.—A. J. Wilmott.

Thalictrum majus Crantz. By the stream at Wanthwaite Bridge, Keswick, Cumberland, July 3, 1895. So named for me by the late E. F. Linton. Baker, in *Flora of Lake District*, under *T. flexuosum* calls the Wanthwaite Bridge plant *T. Kochii*, on the authority of Babington, but expresses his inability to distinguish it from *flexuosum*. Hodgson, in *Fl. Cumberland*, says that a plant gathered by him near Wanthwaite Bridge was identified by H. C. Watson as *T. saxatile* DC., but that he himself failed to discover any striking differences between it and some of the larger speeimens of *T. flexuosum*.—J. W. Carr.

This is a somewhat frequent plant in the Lake Distriet and comes under *T. elatum* Jaequin (*Cambr. Brit. Fl.* iii, 122) = *T. umbrosum* Buteher (*Furth. Illustr. Brit. Pl.* 1930, 7). The lower leaflets are larger and more obtuse than in *majus* and quite glabrous. The stipules are spreading and fringed, and the sepals broadly ovate with few glands. The achenes are rather young and in their present condition closely resemble those of *T. majus*. Aceording to Dr. Moss this is not the *T. elatum* Jacquin of continental authorities but quite distinet and authentie. (See W. B. E. C. 1913–14, 428). Babington's *T. flexuosum* ineludes at least two distinct forms, and is, moreover, not the *T. flexuosum* of either Bernardi or Reiehenbach, so the name is not now used.—W. H. Pearsall.

This is not *T. majus* of Crantz and Jacquin. The specimen in Herb. Jacquin now in the British Museum herbarium

exactly matches the figure in the *Flora Austriaca*, and is not our plant. This is presumably the plant figured by Butcher l.c. pl. 6 as *T. majus*, although it does not appear glandular. —A. J. Wilmott. The specimens answer the descriptions with regard to the leaves, stipules, mode of branching of the inflorescence, and the numerous achenes ; but I fail to find the glands on the underside of the leaves and on the sepals. This character is liable to be absent in other species.—J. Fraser.

As regards the glandulosity of the foliage in these *Thalictra*, it does not appear to have been noticed that the leaflets of the lowest leaf on the shoot (the first of the year) are always practically or quite glabrous, although the later leaves may be densely glandular. On the contrary, the uppermost leaf or two leaves, often very reduced, nearly always bear a considerable number of glands, even when the plant is otherwise eglandular. Such, however, is my experience, and care is therefore required in observing the glands.—A. J. W.

Thalictrum—Shore of Lake Windermere, near Bowness, Westmorland, July 26, 1931. Plant about three feet high, growing on sandy margin of Lake. ? T. *flexuosum* of Baker's *Flora of the English Lake District*.—J. W. Carr. This I take to be the plant named *T. umbrosum* by Butcher ; see *Further Illustr.* pl. 7.—A. J. Wilmott.

Anemone nemorosa L., var. *caerulea* DC. Wood, Ponsanooth, W. Cornwall, v.c. 1, May 7, 1931. In the process of drying the beautiful sky-blue colour has disappeared, and therefore these specimens may be of little value. The variety is frequent growing in patches amongst the type.—Ida M. Roper. There is an interesting paper in *Journ. Bot.* lxii, 265 (1924) by Prof. E. J. Salisbury, giving reasons for regarding this plant as a good variety and not merely a colour-form.—H. W. Pugsley. Var. *caerulea* seems to be a good variety. Like Dr. Salisbury (*J. Bot.* 1924, p. 265) I have never seen any intermediates between var. *caerulea* and var. *genuina* Salisb., such as are so common between the pink- or purple-flowered form of exposed situations (var. *purpurea* DC.) and the white-flowered *genuina*. The restricted distribution of var. *caerulea* seems also to be in accordance with its status as a genetically distinct variety. —E. Drabble.

Plants of var. *caerulea* DC. in my herbarium gathered near Tonbridge, Kent, in 1879 (*Gard. Chron.* Apr. 23, 1881, 539) still retain distinct evidence of the strong blue colour. Var. *purpurea* DC. gathered in 1924 and 1927 at Lurgashall, W. Sussex, (J. E. L.) retains its rose-purple colour. Var. *purpurea* DC. Lansdowne, W. Glos,. 1923, (H. S. Thompson) lost it in three out of four flowers.—J. E. Little.

Ranunculus trichophyllus Chaix var. *radians* (Revel). Old Quarry Pool, Wickwar, W. Gloster, May 24 and 26, 1931.—J. W. White. Extremely beautiful examples of this plant. —W. H. Pearsall.

Ranunculus trichophyllus Chaix var. *radians* (Revel), forma *Godronii* (Gren.). Pond in a field near Stanton Wiek, N. Somerset, May 17, 1929.—J. W. White. Excellent specimens of Grenier's plant. See Report, 1929–30, p. 12.—W. H. Pearsall.

Ranunculus peltatus Schrank. Wurple Pool, Barrow Gurney, N. Somerset, May 4, 1928.—J. W. White. A peculiar form of this species having leaves much smaller than usual, and nearly all of them with ± imbricate lobes. The flowers, submerged leaves and carpels are those of typical *peltatus*, but the lower fruiting peduncles are sometimes 8, or even 10, cm. in length. Rather too robust for Hiern's f. *elongatus*.—W. H. Pearsall.

Ranunculus Baudotii Godr. Saltings at Littleton-on-Severn, W. Glos., May 9, 1928.—J. W. White. Yes.—W. H. Pearsall.

Ranunculus Baudotii Godr. f. *confusus* (Godr.). Saline ditch near Dinas Dindlle, Carnarvonshire. [Ref. C 22]. 12 June, 1931.—J. E. Lousley. A slender form of *R. Baudotii* which would come under Godron's *R. confusus*. The fruiting peduncles are unusually arcuate, but, on the other hand the plant possesses the "Carpelles petits, nombreux, amincis au sommet, à bec assez long," which are less often seen in British than in French examples.—W. H. Pearsall.

Ranunculus Flammula L. var. *radicans* Nolte (var. *tenuifolius* Wallr., var. *pseudo-reptans* Syme). Drigg sandhills, Cumberland, July 31, 1931. Abundantly in damp hollows to the exclusion of any other form of the species. I saw none

but with a single prostrate stem, very rarely rooting at the lowest node. I suspect the form to be a common one in such situations, but this seemed to be an extreme one. It looks to me very like a prostrate *R. scoticus* Marshall, and it is a question whether both that and *R. reptans* are more than forms, or at best varieties of *R. Flammula*.—A. H. Wolley-Dod. Yes, this form is quite common in damp 'slacks' among the Lancs. and Cumberland sandhills. It is certainly not the elusive *R. reptans* L. of our northern lake shores. That is an extreme form possessing a slender filiform stem rooting at every node, much smaller flowers and carpels with a longer beak. Nor is it var. *radicans* Nolte, which is apparently only a smaller and much less robust form of Syme's *pseudo-reptans*, but very distinct in appearance and commonly confused with *R. reptans*. The plant is best left under *tenuifolius* Wallr. =normal *pseudo-reptans* Syme. The carpels are sub-globose to very broadly ovate, and possess a very short and obtuse beak. I have no hesitation in regarding all these 'varieties,' together with *R. reptans* and *R. scoticus*, as mere states, induced by their environment, of *R. Flammula*. C. E. Salmon was of the same opinion; see *Fl. Surrey*, 1931, 96.—W. H. Pearsall. This is var. *tenuifolius* Wallr.(= *pseudo-reptans* Syme; non *angustifolius* Wallr. as in Druce's "List.") It is identical with the Freshfield plant named *R. Flammula* f. *minima* by Ar. Bennett. I quite agree with Col. Wolley-Dod in regarding *R. scoticus* Marshall as a var. or form of *Flammula*.—E. Drabble.

Ranunculus parviflorus L. Very abundant in fallow fields near Southwell, Portland, Dorset, May 19, 1931.—E. C. Wallace.

Ranunculus Ficaria L., var. *incumbens* F. Schultz. Moor Lane, East Clevedon, N. Somerset, April 16, 1931.—Ida M. Roper. Yes.—W. H. Pearsall. Yes, this is the so called "variety" *incumbens* F. Schultz. It does not appear, however, to be of varietal rank; it is quite inconstant and seems to show merely one extreme of leaf-form, of which "var." *divergens* (not *decumbens* as given in *Camb. Brit. Flora*) shows the other.—E. Drabble.

Eranthis hyemalis Salisb. Coppice between Langar and Bingham, Nottingham, Feb. 15, and March 20, 1931. A wonderful sight in the early spring, forming a thick gold and

green carpet over a large area of the wood. From its immense profusion the plant must have been here for a very long time. —J. W. Carr.

Aconitum anglicum Stapf. Bank of stream, near Hueclecote, E. Glos., July 5, 1931. Known there for a century.—H. S. Thompson (with J. H. Haines). Yes, *anglicum* Stapf. To my specimens, as to much material of *anglicum*, the description of *A. Napellus* var. *laciniosum* Seringe, Musée Helv. 1, 1823, " Floribus laxe spicatis *paniculatisque* " is inapplicable.—E. Drabble.

Fumaria Bastardii Bor. [949]. Benslow, Hitchin, Herts., Aug. 19, 1931.—J. E. Little. The material was obtained from a couple of plants on a railwayman's garden. Possibly it was introduced accidentally. *F. Bastardii* does not seem to have been recorded for the county.—J. E. Little. Yes, with very depauperate flowers.—H. W. Pugsley.

Fumaria Boraei Jord. Near Hurst Castle, S. Hants., June, 1931 [Ref. C 15] — W. E. Farenden ; Comm. J. E. Lousley. Yes, var. *gracilis* Pugsl., which is frequent in S. Hants.—H. W. Pugsley.

Fumaria Vaillantii Lois. Arable ground, near Headley, Surrey, July 17, 1931.—I. A. Williams. Correctly named.—H. W. Pugsley.

Barbarea vulgaris R. Br., var. *transiens* Druce. (Approved by Dr. Druce). Field border, Tyndall's Park, Bristol, v.c. 34, May 17, 1927.—J. W. White.

Arabis glabra Bernh. In considerable plenty along about half mile of a sandy lane between Twyford and Lodden Bridge, Berks, May 24, 1931. [C 19].—J. E. Lousley. Yes, —E. Drabble. Good specimens of this very local biennial. —J. Fraser.

Cardamine pratensis L. var. *debilis* DC. In pond, Pinkney's Green, near Maidenhead, Berks, May 24, 1931. [Ref. C 27]. —J. E. Lousley. In *Fl. Berks* Dr. Druce records the uncommon *C. pratensis* L. (restr.) as having been found on Pinkney's Green near Maidenhead. After a prolonged search with R. B. Ullman the plant represented by the present gathering was the only unusual form found. It grew almost

submerged by a small pond on the higher part of the Green. I regard it as a widespread variation typical of unduly moist situations. Thus on Mitcham Common, Surrey, I have known the same form growing in a "splash pool" for some years. At this locality it is frequently submerged to the depth of about a foot during the first few months of the year. The characteristics are a tall, seldom branched stem, bearing cauline leaves with very narrow leaf-segments. The radical leaves are elongated with a few pairs of shortly stalked rotund leaflets which are not distinctly cordate at the base. The flowers are white (or very pale in colour). It probably falls under *C. pratensis* L. var *debilis* DC. (*C. fragilis* Degl. ap. *Lloyd Fl. Ouest Fr.*).—J. E. Lousley. Fine specimens of this growth-form of *C. pratensis*, which is common in wet situations. It seems to me very unwise to give varietal names to such growth-forms; they can hardly be termed even ecads.—E. Drabble.

Brassica Rapa L. Banks of R. Chew, above Pensford, N. Somerset, June 8, 1931. Autumnal seedling leaves, hispid, irregular in shape and size, and darker in colour, August 28. Abundant and probably native in the Chew Valley, as suggested by J. W. White in his *Flora of Bristol*.—H. S. Thompson. Might not this be var. *sylvestris* Wats. ? See *Flora of Surrey*, 1931, 139–140.—E. C. Wallace. I think Mr. Wallace may be right, though Mr. Fraser's note says "Seems to differ from the Turnip (*sylvestris*) of the Thames Valley in the lack of a tuberous root. The slender-rooted form is admitted in the French floras."—H. S. T.

Thlaspi alpestre L. About the Lead Mines above Llanrwst, Carnarvonshire. [Ref. C 12], June 10, 1931.—J. E. Lousley. See Report 1929–30, p. 15 for an interesting discussion on plants from this locality. Dr. Drabble said: "The long style removes it from *sylvestre* and *brachypetalum*," (but he rectified this in the next sentence.—Ed.). However it appears to fit *sylvestre* better than it does the other forms given by by Rouy. Since the style in *T. silvestre* Jord. appears to vary considerably, I am not satisfied that length of style excludes the plant from this species. In the clavis Rouy gives T. *alpinum* Crantz and *T. silvestre* Jord. as the only two species under "Style plus ou moins allongé, égalant au moins les lobes de la silicule ou les dépassant longuement." Further under *T. silvestre* Jord. he says "Silicules obovées, cunéi-

formes à la base, plus ou moins largement ailées au sommet ; échanerure ouverte, ordinairement peu profonde, à lobes plus courts que le style ou l'égalant." I think we may safely leave it under *T. silvestre*.—J. E. Lousley. This plant seems scarcely to differ from the Mendip form.—H. W. Pugsley.

In reference to a form of *Thlaspi* collected at Llanrwst, June 10, 1905, by A. O. Hume and named by him *occitanicum* (Jord.), I wrote (Rep. W. E. Club, 1929–30, p. 15) "This is not *occitanicum* Jord. The long style removes it from *silvestre* . . . . It would seem that long-styled plants of *silvestre* have often erroneously been taken for *occitanicum* . . . ." Though badly expressed, it is evident, I think, that I recognized the resemblance to *silvestre* Jord. However, Jordan's figure (*Obs.* 3, pl. 1B) shows fruits with the style not protruding beyond the wings, while in the text (p. 10) he writes "sinus obtus, égal au style, rarement un peu plus court." Rouy's *Fl. de France*, admirable and useful as it is, should not be used alone, without reference to the descriptions and figures which he cites so abundantly. I am now at work on these forms of *Thlaspi*, and I may state that the Llanrwst plant resembles *T. Gaudinianum* Jord. (*Obs.* 3, p. 14 and pl. 1 *bis* B) far more closely than *T. occitanicum*; but it does not entirely agree with either of these Continental forms. In capsule and style it seems to be identical with *Gaudinianum*, but in the pedicel-characters it comes nearer to *occitanicum*. —E. Drabble.

The style in these specimens is shorter than in H. S. Thompson's Winterhead specimens, and this variation is allowed by Coste (*Flore de la France*) under *T. silvestre* Jord. (*T. alpestre* G. G.) . . . . *T. alpestre* and *T. silvestre* are admitted to be biennial or perennial. I have specimens from near Settle, and from Llanrwst, both of which localities were recorded so long ago as 1870 as stations for *T. occitanicum* Jord. Neither of them agrees with the description. The description of *alpestre* by Linnæus is good as far as it goes; that of *silvestre* Jord. is more minutely detailed, and either might serve, but I see no variety in the Llanrwst specimens. —J. Fraser.

Thlaspi alpestre L. aggr. Winterhead, near Shipham, N. Somerset. In broken, bushy ground on Dolomitic conglomerate, May 16, 1931.—H. S. Thompson. This seems to be the Somerset plant which has been erroneously named

occitanicum, from which it differs in the entire margin of the leaves and in the rounded lobes of the fruit. Of the British forms of *alpestre* it resembles most closely *T. silvestre* Jord., far more so than does the Llanrwst plant. It differs however in its long style and smaller fruits, and may perhaps best be regarded as a definite variety of *silvestre*. I do not think this and the Llanrwst plant are identical.—E. Drabble.

Both Mr. Fraser and Mr. Pugsley would tentatively refer this to *T. silvestre* Jord., and Mr. Pugsley adds "but the British forms of this group need further investigation."

Helianthemum Chamaecistus × *polifolium*. Purn Hill, Bleadon, N. Somerset, June 22, 1931.—H. S. Thompson, who first found it there with both parents in July, 1888, (and recorded the fact in the *Nat. Hist Journ.*, York), some six weeks before the late David Fry independently discovered *polifolium* there in September, and recorded it in *Journ. Bot.* 1888, 313. Possibly it got established at Purn Hill by the agency of birds from Brean Down, three miles distant.—H. S. T.

Helianthemum polifolium Miller. Purn Hill, Bleadon, N. Somerset, June 22, 1931. Too late for good flowering specimens. Mr. Lousley reports that his sheet is the hybrid, so probably one of the labels got wrong.—H. S. Thompson.

Viola ———. [939 A]. Stubble, Hundred acre field, St. Ippolyts, Herts, May 18, 1931.—J. E. Little. *V. variata* Jord. var. *sulphurea* Drabble (a few with some little colour in the upper petals).—E. Drabble.

Viola ———. [C 35/O]. Sandy field, near Loddon Bridge, Berks, May 24, 1931.—J. E. Lousley. Though even less hairy, this cannot be separated from the plant sent to this Club in 1927 from Burghfield Common, Berks. [Y 129] labelled *V. arvatica* by Mr. Lousley, which I then pointed out was not *arvatica* but *V. vectensis* (Report, 1927–28, p. 425), though it in turn was less hairy than the Isle of Wight plant on which *V. vectensis* was founded. The large flowers, of course, at once distinguish these plants (C 35/O) from *Deseglisei*, for small specimens of which they might otherwise be mistaken.—E. Drabble.

Viola ———. [938]. White Hill, Hitehin Herts., May 15, 1931.—J. E. Little. This seems to be quite indistinguishable from the Loddon Bridge, Berks. plant (C 35/O) above. These plants extend one's idea of *vectensis*, but inclusion under that name seems inevitable.—E. Drabble.

Viola lepida Jord. [943]. Sandy fields, Killean, Tayinloan, Argyllshire, July 1931. Leg. Mrs. MeA. Hall. Comm. J. E. Little. Yes; *V. lepida* Jord.—E. Drabble.

Viola agrestis Jord. [915 and 929]. Highover Farm, Hitehin, Herts., Sept. and Oct., 1930.—J. E. Little. Also Great Wymondley, Herts, Oct., 1930.—J. E. Little. Yes.—E. Drabble.

Viola ———. [C 37]. Parts of one large straggling plant, the lower parts of which were decaying away. Sand pit near Loddon Bridge, Berks.—J. E. Lousley. *V. agrestis* Jord. A giant florally as well as vegetatively.—E. Drabble.

Viola ———. N. Barmingham, Norfolk, July 17, 1931.—R. J. Burdon. A mixed gathering. The large spreading plants with small pale flowers are typieal *agrestis*; those with mueh blue in the upper petals are possibly hybrids of *agrestis* with one of the *Tricolores* seetion or with a garden pansy.—E. Drabble.

Viola ———. Mitton, N. Norfolk, July 8, 1931.—R. J. Burdon. Young and for the most part unbranehed *V. Deseglisei* Jord.—E. Drabble.

Viola ———. Lurgashall, W. Sussex, Aug. ,1931.—R. J. Burdon. *V. Deseglisii* Jord. Some of the plants are unusually hairy.—E. Drabble.

Viola ———. Sandy field, Woolbeding, W. Sussex, April 28, 1931.—R. J. Burdon. *V. ruralis*.—E. Drabble.

Viola arvatica Jord. [905]. Highover Farm, Hitehin, Herts., Sept. 8, 1930.—J. E. Little. Yes, *V. arvatica* Jord.—E. Drabble.

Viola ———. [939]. Stubble, Hundred aere field, St. Ippolyts, Herts., May 18, 1931.—J. E. Little. *V. contempta* Jord. Some of these are exeellent speeimens.—E. Drabble.

Viola contempta Jord. var. *patula* Drabble. [923]. High-

over, Hitchin, Herts., Sept., Oct., Nov., 1930.—J. E. Little. Yes, these are *contempta* ; those spreading widely from the base are var. *patula*, which differs from the typical form in this character alone.—E. Drabble.

Viola contempta Jord. [910]. Stubble, near Nine Springs, Great Wymondley, Herts., Oct. and Nov., 1930.—J. E. Little. Yes ; the spreading plants are var. *patula*.—E. Drabble.

Viola Curtisii Forster. Very abundant and wide-spread along the S.W. coast of Anglesey. Flower colour varying from deep blue to pale yellow. Aberffraw Common, Anglesey, June 19, 1931. [C 201].—J. E. Lousley. Yes, the yellow-flowered plants are f. *Fosteri*, the parti-coloured or blue-flowered ones are f. *Pesneaui*.—E. Drabble.

Viola Curtisii Forst. f. *Pesneaui* (Lloyd and Fouc.) Drabble. Drigg sandhills, Cumberland, July 31, 1931. Named by Mr. W. H. Pearsall. It formed large patches making the ground quite blue. Mr. Pearsall tells me it is common in similar situations on the north-west coasts, so I should apologise for sending it.—A. H. Wolley-Dod. Yes ; such excellent and complete specimens need no apology.—E. Drabble.

Silene Otites Wibel. Gravel pit, Chippenham, Cambs., July 15, 1905.—G. Goode.

Silene nutans L. (1) Limestone rocks and old walls at Stony Middleton, near Calver, Derbyshire, June 27, 1931.—J. W. Carr. (2) Limestone bank on road ascending from Miller's Dale to Raven's Tor, near Buxton, Derbyshire, June 21, 1931.—J. W. Carr. I suppose C. E. Salmon would have called these *S. dubia* Herbich. It is certainly very different from the *S. nutans* of Nottingham Castle rock (Bunter Sandstone) whence it, i.e. *nutans*, was first recorded (by Ray) as a British plant. The Nottingham plant was named by C. E. Moss (in *Camb. Brit. Flora*) *S. nutans* var. *Smithiana*. This in Druce's *List* is given as a synonym of *S. nutans* var. *dubia*, which it certainly is not ! The Derbyshire " *S. nutans* " seems to be strictly confined to the Carboniferous Limestone, and is very local, but often abundant where it occurs. The Nottingham plant grows on a dry sandstone.—J. W. Carr.

The Miller's Dale plant : A form of *S. nutans* L. with nearly

white flowers . . . . referred to as *S. dubia* Herbich in C. E. Salmon's paper on that species in *Journ. Bot.*, xliii, 128, 1905. Vide last year's Report, p. 61.—H. W. Pugsley.

The Stony Middleton plant: I would call this *Silene nutans* L. I have it from near Folkestone very similar to this and 16½ inches high; also from . . . . and have gathered it on silicious rocks by the sea, Kincardineshire. All have a very short carpophore, quite different from the tall plant of the Dover cliffs, which Smith named *S. paradoxa*, as *S. paradoxa* L. (Sp. Pl. 1673), with obcordate-emarginate petals and glabrous leaves. Coste says *paradoxa* grows on rocky hillsides of mountains in the S.E. of France. Of *S. nutans* he says it grows on dry meadows, hillsides and siliceous rocks in almost the whole of France. Gaston Bonnier (*Flore Complète de France*, etc.) says three varieties and four sub-varieties have been described, but gives only var. *spathulifolia* Burnat, with spathulate leaves rounded at the ends. Various geological formations and degrees of moisture could easily account for slight modifications in our plants.—J. Fraser.

Silene italica Pers. [Ref. C 5]. Galley Hill, Greenhithe, W. Kent, June 4, 1931. The winter leaves of this species are definitely spatulate; much broader than the leaves which appear in the spring. The calyx-tube varies from light colour to quite deep purple in the same colony.—J. E. Lousley. Correctly named.—J. Fraser.

Lychnis alba Mill. (fl. roseis) (or ×*dioica* L. ?) [947]. Benslow, Hitchin, Herts, June 15, 1931.—J. E. Little. *L. dioica* L. does not occur wild within a radius of 4 miles from Hitchin, and it seemed, in the absence of evidence of crossing, that these plants represented the rosy-flowered form of *L. alba* mentioned by Babington. But I have this year found that *L. dioica* was introduced into a garden at Benslow, Hitchin, presumably by the late A. Ransom, and I now feel uncertain to what these plants should be referred.—J. E. Little. I would name this *alba* × *dioica* without hesitation. The stems are much less hairy and glandular and the hairs shorter than in *L. alba*. The leaves are too broad for *alba* and much less hairy on both surfaces. I have a sheet from near Staines, with red patch, but others in the colony varied greatly in the amount of colour.—J. Fraser. I think this must be *alba* × *dioica*. It has the acute, broad-based calyx-segments of

dioica, and my specimen is eglandular or nearly so ; but the long-stalked flowers and open habit resemble *alba*.—E. Drabble.

Lychnis alba × *dioica*. Dwygyfylchi, Carnarvon, N. Wales, June 14, 1931. [Ref. C 30].—J. E. Lousley. I so name these plants without reasonable doubt. All the specimens came from a single plant, which was growing among both parents. There is considerably more difference between *L. alba* and *L. dioica* than it is possible to express in book-characters. The hybrid is easily distinguished from the colour forms of the parents.—J. E. Lousley. Yes. The leaves are not so broad as in the specimen from Benslow, but the other characters are present. I think the hybrid is fairly frequent, [I agree—Ed.], and have seen a double form of it in gardens.—J. Fraser. Having seen the plant growing with the supposed parental forms, Mr. Lousley should be in a good position to judge ; but I think it is generally believed that the *dioica* form of calyx-segments is epistatic in this cross. If that be so, this cannot be a plant of the F1 generation, though it might possibly be a segregate in F2 or a later generation. My specimen, however, has the habit, leaf-form, shape of calyx-segments and glandulosity (though slight) of *alba* var. *colorata* Rostr. (var. *incarnata* Lamotte), and thus I should be inclined to name this plant in the absence of other evidence to the contrary.—E. Drabble.

Lychnis Githago Scop. Cornfields near Headley, Surrey, July 9, 1931. Introduced with the wheat, as the plants were in the rows of grain.—E. C. Wallace.

Cerastium semidecandrum L. vergens ad var. *glandulosum* Koch. On and about ant-hills, Winterhead, N. Somerset, May 16, 1931. Gathered very wet. Top portion distinctly glandular. See Report 1922–23, p. 207.—H. S. Thompson. Correct for the variety I believe. The stems are little or not branched, and far more densely glandular-hairy than any I have seen in Surrey.—J. Fraser. Koch's description of the variety is simply "valde viscidum." These are glandular enough to come under the var., but the stems are rather less branched and more elongated than is usual in the species.—J. E. Lousley. Dr. Drabble agrees with the determination.

Cerastium semidecandrum L. By sandy track, Reigate Heath, Surrey. [Ref. C 16], May 30, 1931. [C 17], Ap. 26,

1931.—J. E. Lousley. The April gathering shows this plant at an immature stage before the half-membraneous braets have beeome conspicuous. The long roots compared with the small eompaet plant which bears them show that even flowering earlier does not entirely solve the water question for plants which grow on the sand. One plant 1 inch across bore roots $8\frac{1}{4}$ inches long.—J. E. Lousley. Yes, *semidecandrum*. In my sheet of the April gathering the half-membranous braets are extremely conspicuous.—E. Drabble. Correct.—J. Fraser.

Stellaria neglecta Weihe. [2623]. Roadside bank, N.E. of Stanton Drew, N. Somerset, May 31, 1931. Extending thickly for over 400 yards on the S. bank. Calyx and pedicels hirsute. Seeds bluntly tubercled, orange brown. Flowers smaller than in var. *Elizabethae*. Further observation indicates that this is far less common in N. Somerset than the following variety, but Dr. Walter Watson reports that in S. Somerset they are equally frequent.—H. S. Thompson. Correct.—J. Fraser. Yes, *S. neglecta* Weihe. There is an interesting note on this species on p. 183 of Salmon's "Flora of Surrey." In Marshall's original account of his S. *umbrosa* Opiz. var. *decipiens* (*Journ. Bot.* xl, 214 (1902)) *S. neglecta* Weihe is cited as a synonym, and the plant is said to differ from *S. umbrosa* only in having hairy pedieels and ealyx, blunt seed-tubereles and less acuminate lower leaves. This apparently holds good for typical *S. neglecta*, except for the seed-tubercles, which are much like those of *S. umbrosa*. There is a further paper on these plants by Marshall in *Journ. Bot.* xlii, 151 (1904). In the Club's Report for 1906–7 (p. 82) Marshall modified his views and states that there are three forms of this plant in Britain:—(1) *S. neglecta* Whe. (2) *S. umbrosa* Opiz, and (3) *S. neglecta* var. *decipiens*, the last "like *neglecta* but for the bluntly tubercled seeds. Habit usually rather different—nearer *S. media*." The criterion of acutely or bluntly tubereled seeds in distinguishing these plants is not entirely satisfactory, for though in living examples of *S. neglecta* the ripe seeds may be aeutely tubercled, in dried material the tubercles often become more or less blunt. The original descriptions both of *S. neglecta* and of *S. Elizabethae* F. Schultz (*S. umbrosa*) give the seeds as marginally muricate, while in contrast those of *S. media* are termed rugulose; and this seems better to represent the actual points of distinction.

Marshall's later remark that the habit of his var. *decipiens* approaches *S. media*, taken in conjunction with the seed character, suggests that he had then in view a luxuriant form of *S. media* with elongate pedicels, such as may frequently be seen in summer and autumn, and which may closely simulate *S. neglecta*. Salmon (l.c.) says that he cannot find Marshall's third form, and that all of his *neglecta*-like examples with this fruit character seem to be "just luxuriant *media*, which can possess sometimes remarkably long peduncles." This coincides with my experience. Marshall does not seem to have appreciated what appears to be an important criterion with this group—the plant's life-cycle. Babington, Townsend and others have treated *S. neglecta* (sensu lato) as a perennial, but I believe it to be an ephemeral annual, as shown by Moss in "Cambridge British Flora," producing yearly one generation only and flowering from spring till early summer. *S. media* on the other hand is an annual that flowers in any month, constantly reproducing itself and often passing through several generations in a single year. Marshall's varietal name *decipiens* cannot be transferred from typical *S. neglecta*, to which it was originally intended to apply, and I doubt whether the luxuriant form of *S. media* that sometimes resembles it is really more than a state due to environment.—H. W. Pugsley.

Stellaria neglecta var. *Elizabethae* F. Schultz. [2621]. (1) Near Sidcot, N. Somerset, May 16, 1931. Growing on an old stone wall in shade of trees.—H. S. Thompson. (2) [Ref. 2622]. Between Ursleigh Hill and Whitchurch, N. Somerset, May 22, 1931. Abundant on roadside banks.—H. S. T. Correct (2622).—J. Fraser.

Arenaria serpyllifolia var. *scabra* Fenzl. [2640]. Wall in Cheddar village, N. Somerset, Sept. 19, 1931. Very variable, some specimens being short and strict.—H. S. Thompson. Yes, a rather slender and small-capsuled form.—E. Drabble.

A. serpyllifolia var. *macrocarpa* Lloyd ? [2637]. Berrow sands, N. Somerset, July 16, 1931. In abundance along a great length of the strand zone. Some with glandular hairs may be var. *sphaerocarpa* Ten.; but they closely resemble plants of var. *viscidula* Roth from the same coast, 1917, and passed as such by Marshall and by Salmon.—H. S. Thompson. These plants are exceptionally fine specimens of *A. serpyllifolia* var. *viscidula* Roth, with generally dense glandulosity on

sepals and pedicels. Though the capsules are unusually large, the general habit is quite unlike var. *macrocarpa* Lloyd and var. *sphaerocarpa* (Tenore). With these were three specimens of the eglandular var. *scabra* Fenzl. Marshall's gathering, "Burnham to Berrow, June, 1916," included specimens of *sphaerocarpa* Ten.—E. Drabble.

A. serpyllifolia × *leptoclados* ? [2639]. Wall top, Uphill village, N. Somerset, Aug. 21, 1931.—H. S. Thompson. Most of this, all I think, is what I call fairly typical *A. serpyllifolia* L. var. *scabra* Fenzl.—E. Drabble.

Arenaria leptoclados Guss. [2638]. Garden weed, Whiteladies Road, Clifton, Bristol (v.c. 34) Aug. 18, 1931.—H. S. Thompson. Yes, the eglandular form, i.e. var. *scabra* R. and F.—E. Drabble.

Arenaria leptoclados Guss. [var. *scabra* Rouy et Fouc.]. [2636]. Railway bank, Brislington Station, N. Somerset; also a few between the metals, July 20, Aug. 25, 1931.—H. S. Thompson. *A. leptoclados* var. *micrantha* Drabble, characterized by its slender stems, *very small leaves* and flowers, and shorter capsules.—E. Drabble.

Sagina maritima G. Don Sen. Uphill Wharf, N. Somerset, June 22, 1931. Very dwarf.—H. S. Thompson. Yes, a small form of var. *stricta*, but the varieties are not really constant, I think.—E. Drabble. That is my own experience.—H. S. T.

Sagina [*filicaulis* Jord.]. Base of wall, Brislington, N. Somerset, Aug. 25, 1931, and a more prostrate specimen between the metals at the railway station. See Report 1924–25, p. 291.—H. S. Thompson. A glandular form of *S. apetala*, leaves with long basal cilia.—W. H. Pearsall. I call this a very glandular *apetala*. In my opinion C. E. Salmon extended his idea of *filicaulis* too far in the direction of *apetala*, and included some forms of the latter species under *filicaulis*. True *filicaulis*, well represented by Mr. Little's specimen 693 from St. Ippolyts, 1926, is much more like small-flowered slender-stemmed *ciliata*; indeed Rouy (*Fl. Fr.* 3, p. 289) treats it as a variety of *ciliata*.—E. Drabble. I was, of course, influenced by certain plants placed by Salmon under Jordan's *filicaulis*.—H. S. T.

Sagina [*ciliata* Fries ?] glabrous form. Purn Hill, Bleadon,

N. Somerset, June 22, 1931. One sheet only, for verification. —H. S. Thompson. A glabrous and eglandular form of *S. apetala*.—W. H. Pearsall and Dr. Drabble.

Sagina subulata Presl. St. Leonard's Forest, W. Sussex, May 31, 1931.—Ida M. Roper. Correctly named.—J. Fraser. Yes; the ordinary glandular form.—E. Drabble. Yes; leaves very glandular and longly aristate . . . .—W. H. Pearsall.

Erodium cicutarium L'Hérit. var. *pimpinellaefolium* (Sibth.). Oakhanger, Hants., Aug. 9, 1931.—R. J. Burdon. Probably correct, but it is desirable for notes to be made on the colour and size of the petals in the fresh state, for identification.

A. Martinis in *Bull. Soc. Bot. Belge.* IV, 299, gives the following characters for the discrimination of *E. pimpinellaefolium* Sibth. :—

	E. pimpinellaefolium Sibth.	*E. cicutarium* L'Hérit.
1.	Flowers lilac or red.	Flowers white or pink.
2.	Petals twice the length of calyx.	Petals a little longer than calyx.
3.	An oval spot formed of black points above the claw, on the two upper petals.	Petals without spot.
4.	Calyx with adpressed hairs, and others spreading and glandular.	Calyx with a few short hairs, not glandular.
5.	Segments of adult stem leaves short and obtuse or shortly acuminate.	Segments of adult stem leaves linear and very pointed.

—E. G. Baker.

Trigonella ornithopodioides DC. showing nyctinastic leaf movements. [C 38]. Reigate Heath, Surrey, May 30, 1931. —J. E. Lousley. (Half the specimens were pressed at midnight; the remainder were left in the vasculum and pressed at 9 a.m. next day). Dr. Drabble points out "the well known fact that *Trigonella* in common with many pulvinate Leguminosae exhibits such movements, and also that *for a time* they are continued rhythmically independently of the change from darkness to light."

Medicago hispida Gaertn. aggr. Spires 3–4. [952]. Wool alien. Great Wymondley, Herts., Sept. and Oct., 1928.—J. E. Little. See W. E. C. R. 1928, 471. These sheets,

having more spires in the fruit, were reserved for further consideration, but they were gathered at the same time as [761].—J. E. Little. This is what I regard as *M. denticulata* Willd. (*M. hispida* Gaertn. subsp. *polymorpha* Willd. ; *M. denticulata* G. and G. of Rouy). It is the commonest form of *M. hispida* sensu lato in this country.—E. Drabble. Coste adopts *M. polycarpa* Willd. as the name and *M. hispida* Gaertn. as the synonym ; while G. Bonnier reverses the order. A large number of forms have been described as species which differ from one another in the breadth of the fruit and the strength of the spines. As they are weeds of cultivation these characters would vary. I should place this to *M. hispida* (*M. polycarpa*).—J. Fraser.

Medicago hispida Gaertn. [761]. Great Wymondley, Herts., Aug., Sept., Oct., 1928.—J. E. Little.

Medicago arabica Huds. (Legumes). Near Foxholes, Hitchin, Herts., July 6, 1928.—J. E. Little. These pods are not mature, but I believe they fall in respect of the length of the spinules under the same as [953], as do all the British specimens that I have hitherto met with. " Var. *longispina* Rouy. Epines subulées, très arquées, egalant environ la largeur du légume."—J. E. Little.

Medicago arabica Huds. [953] ? var. *longispina* Rouy (legumes). Great Wymondley, Herts., Oct. 1928.—J. E. Little. Correct as far as the spines go for the type. The long spined form appears correct. I gathered it in the parish of Kew in 1888. The spines are not hooked.—J. Fraser.

Trifolium squamosum L. Sea bank, Uphill Wharf, N. Somerset, June 22, 1931.—H. S. Thompson. Yes ; *squamosum* L. (*maritimum* Huds.) ; beautiful material.—E. Drabble. My copy of the *Species Plantarum* spells the name *squarrosum*, and Coste does the same. G. Bonnier accepts *T. maritimum* Huds. and describes a sub-species *T. panormitanum* Presl. with oblong, emarginate leaflets. H. S. Thompson's specimen agrees with this.—J. Fraser.

Trifolium arvense L. Pale greenish-white form, conspicuous from a distance. Burnham Golf Links, N. Somerset, July 16, 1931.—H. S. Thompson.

Lotus corniculatus L. var. *hirsutus* Rouy. On the Chesil

Beach, Portland end, Dorset. May 17, 1931.—E. C. Wallace. The same plant is also described as var. *villosus* Ser. The description of this is, upper part of the stem, leaves and calyx hairy with long, spreading, villous hairs.—J. Fraser. *L. corniculatus* L. e. *hirsutus* Rouy of the *Lond. Cat.* ; d. *incanus* Gray (*hirsutus* Rouy of Druee's *List*). Rouy (F. Fr.) calls it *L. corniculatus* L. *a. arvensis* Ser. sub-var. *hirsutus*.—E. Drabble.

Vicia lathyroides L. Maulden, Beds., June 9, 1931.—Leg. C. Crouch, Comm. J. E. Little. This was distributed to the B. E. C. (Report 1914, 137) in an earlier state. Well-formed pods now sent will, it is hoped, be aceeptable.—J. E. Little Very useful fruiting material.—E. Drabble. Yes. Often nearly buried in loose soil or sand, as these appear to have been.—J. Fraser.

Vicia bithynica L. Wollard Hill, above Publow, N. Somerset, June 16 and 30, 1931.—H. S. Thompson. After further observation during several years I believe this plant is usually annual. The late David Fry came to that eonclusion after frequent observation in this district and by cultivation in his garden. Coste, Gastón Bonnier and Areangeli (*Fl. Ital.*) say annual. Babington and Hooker fil. considered it perennial ; probably beeause of the hard, woody nature of the thick rootstock.—H. S. T.

Lathyrus tuberosus L. Thieket on south-western slope above Cheddar, N. Somerset, July 10 and Sept. 19, 1931. Established there very loeally during the last few years, this apparently being the first reeord at Cheddar. Enquiry in the village proved that before the War the land was cultivated with strawberries, and afterwards pigs were fed there by a miller. On September 19 extremely few pods were seen, probably owing to the showy flowers having been gathered. And on July 10 few flowers were seen in blossom.—H. S. Thompson.

Lathyrus silvestris L. ? var. *platyphyllos* Retz. [945]. Sutton, Beds., July 23, 1931.—M. Brown and J. E. Little. Yes, var. *platyphyllos* Retz. (var. *latifolius* Peterm.).—E. Drabble. I think it passable.—J. Fraser. Mr. Lousley agrees, and says "about as eommon as the narrow-leaved form." This is the usual form of the speeies seen in Britain, and not a broad-leaved variety.—H. W. Pugsley. From the

fine and complete specimen sent me, I would entirely agree with Mr. Pugsley. Apart from the existence of the good species *L. latifolius* L., that a varietal name be given to a form with some slightly broader leaves than others not infrequently growing in the same bush is unfortunate. There may be Continental specimens more worthy of the names given by Retzius and Petermann.—H. S. Thompson.

Lathyrus maritimus Bigel. (Pods and Seeds). Aldeburgh, E. Suffolk, Sept. 27, 1928.—K. D. Little, Comm. J. E. Little. East Suffolk is a very old county record.—J. Fraser.

Rubus ———. Oakhanger, Hants., Aug. 8, 1930—R. J. Burdon. This is *R. sublustris* Lees, type.—H. J. Riddelsdell.

Potentilla argentea L. var. *dissecta* Wallr. [C 2]. Ham Gravel Pits, near Richmond, Surrey, Ju.y 4, 1931.—J. E. Lousley. This seems to be the plant determined by British authors as var. *tenuiloba* Jord., which is accepted as being synonymous with var. *multifida* Tratt. on the Continent. I believe that var. *tenuiloba* Jord. has a more spreading, lax, corymb than the present plant, which I determine as var. *dissecta* Wallr.—J. E. Lousley. I would name this *P. argentea* Linn. var. *tenuiloba* (Jord.). I gathered it on the banks of the Thames in 1894, while the plants were still small, though flowering and fruiting. Later on it got into the Ham Gravel Pits where hundreds appeared for a time, but have since largely disappeared. See Jordan's *Pugillus Plantarum Novarum*, p. 67, where he gives a very minute description, even to the very finely striate and rugose achenes. The radical and lower cauline leaves have five leaflets, with 2–4 linear-oblong, acute, porrect teeth. Near the top of the stem the leaves consist of three leaflets, each with two teeth; finally the leaves are reduced to three, with very short teeth or none, and sessile.—J. Fraser. This is the common British form of *P. argentea* L.—H. W. Pugsley. I should not say so of the specimen sent me.—Ed.

Alchemilla pratensis Schmidt. [C 18]. Crazies Hill, near Wargrave, Berks., May 24, 1931.—J. E. Lousley. This is large for *A. minor* Huds., but that is what it is. *A. pratensis* has the whole of the inflorescence glabrous.—J. Fraser.

Rosa arvensis×*canina* ? Dolley's Farm, Horsell Common, Surrey, Aug. 18, 1931. From the peculiar shaped fruits,

apparently barren, this appears to be a hybrid, and from the shape and serration of the leaves it has some form of *canina* as the other parent. The habit of the bush is typically *arvensis*. I regret I cannot remember the colour of the flowers—an omission which can be rectified next year.—W. Biddiscombe. I have only seen a single and not very good specimen. The fruit is not well formed, which makes one suspect hybridism, but otherwise I see nothing to keep this from *R. arvensis* var. *ovata* (Léj.) Desv.—A. H. Wolley-Dod.

Rosa canina L. group *andegavenses* f. *globosa* W.-Dod. Burningford, Surrey, Aug. 3, 1931.—W. Biddiscombe.

Rosa canina Linn. [var. *Pouzini* (Tratt.)] f. *Wolley-Dodii* Sudre. [Ref. No. 261]. Ham Common, Surrey, Aug. 16, 1931. Lt.-Col. A. H. Wolley-Dod says, "all correctly named. The leaflets are somewhat broader, especially at the base, than on my original gathering, and those on the pseudo-barren shoots from below the inflorescence are abnormally large, just like leaflets on barren shoots usually are." My only excuse for gathering the pseudo-barren shoots was because the leaves had mostly dropped from the flowering shoots, as in several varieties of *R. canina*.—J. Fraser.

Rosa coriifolia Fr. var. *subcollina* Chr. Dunsford Common, Surrey, Aug. 3, 1931.—W. Biddiscombe. I do not think this should be labelled *subcollina*, as that should be pubescent on the midrib and primary nerves of the under surface only, whereas this specimen is more pubescent on both sides than the majority of varieties of *R. coriifolia*. I have no better names from Keller for similar forms of the Subcollinae, but have sent him a very similar specimen in my parcel this year and if I get a satisfactory name from him in time for the Report I will let you have it.—A. H. Wolley-Dod.

Rosa tomentella var. *decipiens*, or by new arrangement *R. obtusifolia* var. *tomentella* f. *decipiens*. Dolley's Farm, Horsell Common, Surrey, Aug. 24, 1931.—W. Biddiscombe. Col. Wolley-Dod agrees with the name on the only sheet seen.

×*Rosa Rogersii* W-Dod (*R. tomentosa*×*canina*). Langdale, Westmorland, July 27, 1931. [Ref. 2079]. I send a few sheets of this, which I am also sending to the Botanical Exchange Club, so hope that they will reach those who are not members of both. The hybrid has been confirmed by Keller, but it is

much on the *tomentosa* side, showing the influence of *canina* in the thinner pubescence and more simple serration of its leaflets, which also are more of the shape usual in *canina*. The fruit is not well-formed though none is quite barren as is usually the case in *spinosissima* hybrids.—A. H. Wolley-Dod. *R. tomentosa* is evident. The *R. canina* parent may be seen in the reduced secondary glandular serrations of the leaflets, and the reduction of the pubescence to a sparing amount on the midrib and secondary veins beneath, and in the oval shape of the small leaflets.—J. Fraser.

Rosa [*dumetorum* Thuill. var. *Déséglisei* (Bor.)]. By the Artro river, Llanbedr, Merioneth. Aug. 20, 1931.—Ida M. Roper. Certainly not *Déséglisei*. The single example sent to me is very like *R. tomentosa* var. *scabriuscula* Sm, but with short peduncles and decidedly hispid styles. I should so label it tentatively, though if I had seen the whole gathering I might have given a different opinion. If any member doubts this name and will send me his specimen I will amend the name if it seems desirable.—A. H. Wolley-Dod.

Rosa [*tomentosa* var. *cuspidatoides* Crép.]. Nant Francon, Carnarvonshire, Aug. 26, 1931.—Ida M. Roper. (One sheet for naming). This is very obvious *R. rubiginosa*; see the acicles beneath the inflorescence, the shape and dentition of the leaflets and their intense glandular development. Doubtless when fresh they had a strong Sweetbriar odour.—A. H. Wolley-Dod.

Sorbus Aria Crantz, var. *lanifera* Kerner. A solitary tree on the border of a limestone wood near Clevedon, N. Somerset, v.c. 6, June 15, 1931.—J. W. White. This quite agrees with specimens collected by Augustin Ley in Leigh Woods, N. Somerset, 1892, and now in the herbarium of Dr. Hedland.—J. Fraser.

Callitriche intermedia Hoffm. var. *lacustris* Williams forma *Halleri* (see Williams *Prod.* p. 509). Ditch, Mitcham Common, Surrey, May 10, 1931. [C 157]. A few fruits are present. A month later the ditch had been cleared out.—J. E. Lousley.

Callitriche intermedia Hoffm. [2631]. Roadside ditch, Sharpham Peat Moor, Somerset, v.c. 6, June 26, 1931.—H. S. Thompson. This is correct, I think. An extremely variable species.—W. H. Pearsall. Of a series with linear

leaves only, and originally numbered 2632, and from the same ditch, Mr. Pearsall wrote, " I should include this with 2631." And of a sheet numbered 2632 Mr. Pugsley wrote, " The sheet seems identical with No. 2631." Some of 2631 and 2632 were obviously not completely homogeneous sets.—H. S. T. The sheet 2631 sent shows a branched plant with the leaves linear and notched, except those of the terminal rosettes, which are broadly spathulate. The fruits are like those of *C. obtusangula* Le Gall. Rouy (Fl. France, xii, 185) remarks that the lower leaves of this species are sometimes linear. As the plant appears to grow with normal *C. obtusangula* and perhaps *C. truncata*, it is possibly of hybrid origin rather than a form of *C. obtusangula* ; or the second parent may be *C. intermedia*, as was suggested for *C. Lachii* Warren, which was found in Cheshire and seems to be a somewhat similar plant.—H. W. Pugsley.

Callitriche obtusangula Le Gall. [2633]. Roadside ditch, Sharpham Peatmoor, Somerset, v.c. 6, June 26, 1931.—H. S. Thompson. Yes ; possibly with some slight admixture, almost inseparable from this genus.—W. H. Pearsall. The sheet received seems correctly named. The specimens have apparently come from the same station as those sent last year. —H. W. Pugsley.

Callitriche obtusangula Le Gall. Eridge, near Tunbridge Wells, Sussex, May 31, 1931.—H. W. Pugsley and H. C. P.

Epilobium parviflorum × *tetragonum* ? [2641]. By dock, Hotwells, Bristol, v.e. 34, Aug. 3, 1931.—H. S. Thompson. Of the three specimens seen originally by Dr. Drabble, two were correctly named and the third was *tetragonum*.—H. S. T. A sheet sent to Mr. Little was found by him and Dr. Drabble to be narrow-leaved *parviflorum* only (stigma fully lobed).

Epilobium montanum L. fl. albo. [C 34]. Nant Ffrancon, Carnarvonshire, June 29, 1931.—J. E. Lousley. I have never before seen so extensive a colour-form of this. For about a mile and a half along the road from Ty-gwyn to Tyn-y-meas I met with only the white form. Then colonies of white and coloured plants occurred, finally giving place to all coloured. When gathered these flowers were pure white with no trace of colour ; in the press a few developed traces of colour.—J. E. Lousley. Yes ; my specimen shows some purple colour in the

flowers.—E. Drabble. All that is claimed for this is correct. My specimens have developed some pink stains, but this occurs in other albinos of *Nepeta Glechoma*, *Anagallis arvensis*, etc.—J. Fraser.

Epilobium montanum × *parviflorum*. [2640]. Waste ground near Clifton Bridge Station, N. Somerset, Sept., 20, 1931.—H. S. Thompson. Yes, I think there can be no doubt about this.—E. Drabble.

Epilobium lanceolatum Seb. and Maur. Polperro, E. Cornwall, Oct. 10, 1931. A lax form. The habit is not due to season nor habitat. It persists throughout the year and is equally lax as a garden weed or on a dry bank. Nor is it a shade form. It usually grows in full exposure to the sun but rarely develops the reddish tint of the typical plant.—F. Rilstone. Correct. I have it more lax than this from the Channel Isles. It can grow 8–24in.—J. Fraser. Yes, *E. lanceolatum*; my specimen is the ordinary form as I know it in many parts of Cornwall and elsewhere.—E. Drabble.

Epilobium roseum Schreb. [2644]. Garden in Abbotsford Road, Redland, Bristol, Aug. 18, 1931.—H. S. Thompson. Yes; stigma entire.—E. Drabble. In regard to the mildew by which these specimens were affected, Dr. W. R. Ivimey-Cook reported, "The fungus is probably *Plasmopara epilobii* Schröt, though it is only recorded on *E. palustre* and *E. parviflorum*. Owing to the state of the material I cannot make an accurate identification." A small dried plant only was given to Dr. Ivimey-Cook.—H. S. T. Correct. It is fond of gardens and garden banks.—J. Fraser.

Epilobium tetragonum Curt. [2642]. Waste ground, Hotwells, Bristol, Aug. 3, 1931.—H. S. Thompson. Yes, good *tetragonum*.—E. Drabble. Yes.—J. Fraser.

Epilobium Lamyi F. Schultz. Cult. Kew, from Beaconsfield, Bucks., July 11, 1931. The specimens are the second generation from one plant, and were self-sown, many being crowded and consisting of a single stem. A few were over two feet high. There is an autumnal rosette of leaves.—J. Fraser. Yes, *E. Lamyi* (but my specimen does not show the characteristic autumnal rosettes). It agrees well with material in my herbarium grown by J. G. Baker from seed supplied by F. Schultz himself.—E. Drabble.

Seseli Libanotis Koch. Seaford Head, E. Sussex, Aug. 30, 1931. [C 11]. A large colony showing great variation according to exposure to the sea winds.—J. E. Lousley. Yes, but my specimen is without fruit.—E. Drabble.

Galium verum L. var. *maritimum* DC. Drigg sandhills, Cumberland, July 31, 1931. This is the best marked *maritimum* I have seen. It ran extensively in the shifting sand in order to keep its head above ground, many of the runners being stoloniferous. The sand was so loose that I never succeeded in getting to the bottom of the roots.—A. H. Wolley-Dod. Excellent material of what is apparently the true plant. Dune forms of the type often serve to pass as the variety.—E. C. Wallace. Remarkably dwarf, flowering and fruiting freely. An ecad, developed by environment. —J. Fraser. Very characteristic specimens of var. *maritimum*, collected to show the underground stems. An ecad rather than a variety of *verum*, I think.—E. Drabble.

Galium erectum Huds. (mostly in fruit). Roadside, Ullenwood, E. Glos., July 4, 1931.—H. S. T. with Mr. John Haines. I agree with the determination of a specimen from Ullenwood, 1913, from the late A. S. Montgomery; but two of those gathered by me on July 4 and one of Montgomery's (1915) are nearer *G. Mollugo* var. *Bakeri* (Syme); and some from that place were so regarded in B. E. C. Report of that year.—H. S. Thompson. Apparently *G. erectum* Huds.—H. W. Pugsley. Correct. Hooker, in *Stud. Fl.*, places this as a sub-sp. of *G. Mollugo* L. Dr. von Hayek, in Hegi *Illust. Fl. Mitteleuropa* VI, 213, also places it thus. He has the following :—subvar. *hirtifolium* H. Br., plant in lower part hairy; var. *nemorosum* (*G. nemorosum* Wierz.) leaves longer, up to 20mm., and subvar. *Oborayanum* H. Br., a hairy form.—E. G. Baker. The lamented Dr. Briquet (the greatest authority in Europe on *Galium*), who was so fond of redueing speeies to sub-speeies, also redueed *G. erectum* Huds. to a sub-sp. of *G. Mollugo*. If so inclined, it would be easy to give half a dozen names to different forms of *Mollugo* and *erectum* all more or less merging into one another, and I have depauperate *erectum* on thin stony soil simulating *silvestre*, and not 6 inches high. See Reports, 1919–20, p. 103; 1925–26, p. 339; (last year there was no trace of any *Galium* in that Mendip pasture); *Journ. Bot.* 1919, 286; and Tansley in *Journ. Ecol.* 1917, "On Competition between *G. saxatile* L. and *G. sylvestre* Poll. on different types of soil."—H. S. Thompson.

Galium palustre L. As a strand plant without flowers or fruit. Berrow sands, just above H. W. mark, N. Somerset. Sept. 22, 1931. Leaves, mostly in fours, broader (up to 5mm. broad) and more obtuse than normally.—H. S. Thompson. A curious form.—E. G. Baker. As far as the stems and leaves are concerned I would call this a state of *G. palustre*, due to salt water under the sand. The stems are finely scabrid on the angles ; the leaves consistently in fours, with reversed setulae on the margins and on the midrib beneath.—J. Fraser. *G. palustre* L., abnormal and not flowering.—H. W. Pugsley.

Galium anglicum Huds. Plentiful on walls in the town of Mildenhall, W. Suffolk. [C 1]. July 11, 1931.—J. E. Lousley. Yes.—E. Drabble. Characteristic specimens, except that my pieces have no roots to show that the plant is annual.—J. Fraser. Correct.—E. G. Baker. Sir J. Hooker placed this as a sub-sp. of *G. parisiense* L. Dr. von Hayek gives it as a synonym of *G. parisiense* L. var. *leiocarpum* Tauseh. I notice von Hayek places *G. silvestre* Poll., which he considers the same as *G. pusillum* Smith, as a synonym of *G. asperum* Schreber. Those interested in this plant should consult Briquet in Schinz and Keller *Flora der Schweiz*, and Schuster in Oestrr. Bot. Zeitschrift, 1909, p. 1 et seq.—E. G. Baker. Yes, and Briquet reduced *G. anglicum* Huds. to a variety of *G. parisiense* L. Smith also gave *anglicum* as a synonym of *parisiense* (but of Relhan instead of Linné). Smith's *English Flora* in four vols. 2nd ed., 1828–30, is still a most useful work, especially for synonyms and full references—H. S. T.

Valerianella eriocarpa Desv. Rocks and ledges at Church Ope Cove, Portland, Dorset, May 19, 1931. As only a few sheets were distributed before, I now send ample material. See Report, 1928–29, p. 476.—E. C. Wallace. Seems right, but my specimens are without fruit.—E. Drabble. Appears right in every particular, but I should have liked it in fruit to show the interesting, five- or six-toothed calyx better.—J. Fraser.

Senecio erraticus Bert. [819]. Pond near Hookham's Farm, Lurgashall, W. Sussex, Aug. 16, 1929 ; Aug. 6, 1930.—J. E. Little. Two sheets were also sent from Lineh, W. Sussex, Aug. 14, 1929. [792]. Little and Burdon ; and from near Blackdown House. [794]. Little and Burdon, Aug. 17, 1929. Dr. Drabble has confirmed several plants from this woodland

area. Seen in the field, the wide-spread corymb is very striking. In 1931 robust plants measured two feet across. But it is difficult to find botanical characters by which it may be separated from *S. aquaticus*. See B. E. C. R. 1929, p. 229. —J. E. Little. I should name this (plant from North Chapel) *S. aquaticus* Hill. var. *pennatifidus* Gren. and Godr.—H. W. Pugsley. Segments of the upper cauline leaves spread at right angles from the midrib, as required. . . . It seems to me the right plant.—J. Fraser. My sheet is certainly *erraticus*. I think the large very open inflorescence with long, slender branches and the characteristic form and direction of the leaf lobes are good "botanical" characters. That *erraticus* is closely related to *aquaticus* seems clear. *S. aquaticus* var. *genuinus* G. and G. is by no means common in this country where the commonest form is var. *pennatifidus* G. and G., and this leads through var. *major* Bab. and var. *intermedius* Druce to *erraticus*. Rouy is probably fully justified in treating *erraticus* as a "forme" of *aquaticus* though in most Continental floras they are treated as distinct species.—E. Drabble.

Crepis taraxacifolia Thuill ? forma. [2627]. Portishead sea front, N. Somerset, June 25, 1931. A peculiar form with abnormal, broad, oboval stem-leaves which are ± sagittate and toothed at base. Short hispid hairs on under surface, especially on midrib. Involucral bracts glandular tomentose, much longer than pappus. Pedicels hispid and glandular.—H. S. Thompson. *C. taraxacifolia* Thuill. A very polymorphic species.—H. W. Pugsley.

Crepis taraxacifolia Thuill. [2625]. In rough mowing grass, near top of Wollard Hill, N. Somerset, June 12, 1931.—H. S. Thompson. Yes.—E. Drabble. Yes.—H. W. Pugsley.

Crepis capillaris Wallr. [2626]. In mowing grass, Stratford Mill, Chew Valley, N. Somerset, June 12, 1931.—H. S. Thompson. This tall, stout, large-headed form with long greenish grey gland. hairs on involucre and peduncles is var. *anglica* Druce and Thellung f. *griseola* Thellung.—E. Drabble.

Hieracium ———. Canal bank, between Ambergate and Whatstandwell, Derbyshire, July 11, 1930.—J. W. Carr. *H. vulgatum*. Fr.—H. W. Pugsley.

Hieracium ———. North Barmingham, Norfolk, July 7, 1931.—R. J. Burdon. I think *H. scanicum* Dahlst. ; some specimens too weak to be characteristic.—H. W. Pugsley.

Hieracium ———. In woodland, Frocester Hill, E. Glos., June 20, 1931.—H. S. Thompson. A form of *H. serratifrons* Almq.—H. W. Pugsley.

Hieracium pulmonarioides Vill. Wall top, Richmond Hill, Clifton, W. Glos., July 1, 1931. This rather handsome Hawkweed persists in great quantity at this old locality, and plants have appeared on two neighbouring walls.—H. S. Thompson.

Hieracium umbellatum L. var. *coronopifolium* Bernh. Sheerwater, Byfleet, Surrey, Sept. 14, 1930.—E. C. Wallace. Correctly named.—H. W. Pugsley.

Hieracium boreale. Hindhead, Surrey, Sept., 1931.—R. J. Burdon. This appears to be *H. sedunense* Grml. var. *perpropinquum* Zahn. under Roffey's arrangement.—H. W. Pugsley.

Taraxacum ———. Parkhurst, Lurgashall, W. Sussex, April 17, 1931.—R. J. Burdon. Under *T. paludosum* Schlech. (*T. palustre* Lamarck and DC.), I think.—E. Drabble.

Lactuca virosa L. [956]. Achenes. Hitchin, Herts., Aug., 1930.—J. E. Little. "Fruit with a thick cellular wing and ribbed faces," Hooker. 'Student's Flora' (1884). This character is well shown in these fruits, which are broader than those of *L. Scariola* L., and have only very slight pubescence at the tip. Cf. W. E. C. R. 1930, p. 76. This plant is grown as a drug at Hitchin, and has spread from this origin in many waste places, as chalk pits and railway cuttings. But there is one station on the north road near Caldecote, on one side in Herts., on the other in Beds., which was recorded by Coleman in 1841. Here it was still to be found in 1931 on the Herts. side, and a few years ago also on the Beds. side.—J. E. Little. Correct. Achenes black, thickened at their edges, and longer than the persistent part of the beak.—J. Fraser.

Lactuca Scariola L. Waste ground, Avonmouth Docks, W. Glos., Sept. 19, 1929.—J. W. White.

Calluna vulgaris Hull var. *incana* Reichb. By swamp on Horsell Common, Surrey, Sept. 20, 1931.—E. C. Wallace. Yes.—E. Drabble.

Erica Tetralix L. Abnormal form. Flowers replaced by heads of sepaloid bracts. Near Moreton, Dorset, Oct. 15,

1931.—L. B. Hall. With normal heads from adjoining clump gathered at the same time. All the heads on a good sized clump were similarly affected. I should be glad of comments and records of occurrence of this or similar forms.—L. B. Hall. Dissecting what was intended for a bloom of this, I found a very small ovary in the centre. All the rest of the overlapping scales were smaller than the normal sepals and less highly coloured than them. The corolla was absent. Bracts, sepals, corolla and stamens were all involved in this reversion, and all except the bracts had not reached their proper form. All four are homologues of the ordinary leaf. I have not seen this previously.—J. Fraser.

Daboecia cantabrica K. Koch. Abundant along south shore of Lough Corrib, N.W. of Oughterard, Connemara, Galway, July 16, 1895.—J. W. Carr.

Limonium paradoxum Pugsl. [493]. (In *Journ. Bot.* lxix, 44 (1931)). St. David's Head, Pembrokeshire, H.W.P. and F. Druce, Aug. 12, 1931.—H. W. Pugsley.

Glaux maritima L. Autumn state (thin and very green) as a strand plant on pure sand at H.W., Berrow, N. Somerset, Sept. 22, 1931. No sign of fruit or flowers.—H. S. Thompson.

Anagallis arvensis L., forma *carnea* Schrank. Newborough sand dunes, Anglesey, v.c. 52, Aug. 28, 1931. Margin of petals glandular ciliate. This striking colour-form was more abundant than the scarlet one.—Ida M. Roper. Yes, f. *carnea* (*A. carnea* Schrank).—E. Drabble.

Erythraea pulchella Fr. Glade in wood on Weald clay, near Alfold, Surrey (Sussex border), Aug. 2, 1931.—E. C. Wallace. Yes.—J. Fraser. Yes, the ordinary form of *pulchella*.—E. Drabble.

Gentiana Amarella Linn. Damp hollows on the sandhills, Newborough Warren, Anglesey, Aug. 28, 1931.—E. C. Wallace. Yes.—J. Fraser.

Symphytum officinale var. *purpureum* Pers. and var. *ochroleucum* DC. In several places in the Chew Valley below Pensford, N. Somerset, both on the river banks and at roadside. May and June, 1931.—H. S. Thompson. (Fl. mauve) cf. *S. officinale* var. *ochroleucum*×*peregrinum*.—H. W. Pugsley. (Fl. cream coloured) *S. officinale* L. var. *ochroleucum* DC.—H. W. Pugsley.

Symphytum peregrinum Ledeb. ? Corollas an attractive red-purple. Bank of Newton Mill stream, near Bath, N. Somerset, June, 1931.—H. S. Thompson. Apparently *S. officinale* var. *purpureum* × *peregrinum*.—H. W. Pugsley.

Symphytum tuberosum L. [491]. (Vide *Journ Bot.* lxix, 89 (1931). Wood-edge at Eridge, (near Tunbridge Wells), Sussex, May 31, 1931.—H. W. Pugsley and H. C. Pugsley.

Myosotis caespitosa Schultz. In a ditch, Trelawne Mill, near Looe, E. Cornwall, June 9, 1927.—F. Rilstone. This is typical *M. caespitosa* Schultz.—A. E. Wade.

Myosotis caespitosa Schultz. Boggy ground, Trelawne Mill, near Looe, E. Cornwall, June 9, 1927. This plant is not caespitose and has emarginate petals.—F. Rilstone. Apart from the simple stem, there is nothing to separate this plant from the specimens gathered in a ditch at Trelawne Mill. It is a form which is met with quite frequently in populations of the normal plant, and I take it to be only an annual state. The shape of the petals of *M. caespitosa* are variable, sometimes being entire or emarginate on the same plant. I have seen a large number of specimens of *M. caespitosa* from all parts of Europe, and find that in comparison with the other species of *Myosotis* its characters are remarkably constant.—A. E. Wade.

Verbascum Lychnitis × *Thapsus*. [942]. Chalk Pit, Hitchin, Herts., July, 1931.—J. E. Little. *V. Lychnitis* and *V. Thapsus* occur here together. I have not before observed the hybrid. The leaves bear most resemblance to those of *V. Lychnitis*, but are decurrent for about half the internode. The inflorescence has branches much longer than is occasionally seen in robust forms of *V. Thapsus*. The flowers are light yellow.—J. E. Little. The specimens are nearer to *V. Lychnitis*. In looking for the other parent, it will be seen that the flowers are larger than those of *V. Lychnitis*, the leaves much more densely hairy above, and they are decurrent upon the stem. The light yellow colour of the flowers may be due to *V. Lychnitis* var. *album*., which is the more common form in Britain.—J. Fraser.

Verbascum nigrum × *Thapsus*. [941]. Benslow, Hitchin, Herts., July 28, 1931.—J. E. Little. (*V. nigrum* and *V. Thapsus* grow in proximity). The leaves do not present the separation of lamina and petiole of *V. nigrum*. They are

sometimes more abruptly narrowed at the base than in *V. Thapsus*, but there is a continuation of the lamina down the petiole. The colour of the flowers is of a lighter yellow than in *V. nigrum*, and the upper hairs on the filaments are of a washed-out purple. Two plants of this hybrid were quite sterile.—J. E. Little. Here again *V. Thapsus* is the weaker parent in the hybrid. The radical leaf is evident. The branch in my sheet is more hairy even than that of the tomentose variety of *V. nigrum*, and so are the sepals. The size of the flowers is intermediate. *V. nigrum* is seen in the angular stem, the scattered clusters of flowers, the slender branch, the small flower buds, the much less felted sepals, the purple hairs of the filaments, and the non-decurrent anthers. I should have liked a little bit of the main stem and its leaf attached. What puzzles me is the length of the two branches I have received. I have seen *V. Thapsus* as a simple rod, 8ft. high, and *V. nigrum* has only short branches at the base.—J. Fraser.

Linaria Cymbalaria Mill. sub-var. *pallidior* Rouy. [2666]. Along 100 yards of wall, Brislington, N. Somerset, Sept. 25, 1931. Flowers smaller, averaging 8mm. (some only 6mm.) and more ragged than in type; white, with occasional pale green tendency. Seeds minute, tubercled, white when falling out of capsules, and later grey-brown.—H. S. Thompson. Yes.—E. Drabble. A dozen very large leaves of *L. Cymbalaria* gathered in a populous part of Clifton on Nov. 21, vary in size from 42mm.×25mm. to 95mm.×40mm.; nine of them measure over 50mm. across, and the stems of two are both 110mm. long.—H. S. T. The flowers are small, those of type being 8–10mm. long. The stems can be 2ft. 8in. long, even in N. Aberdeen. The pale colour of the flowers agrees with the name; presumably the plant reproduces itself as in the albino. There is a globular or tufted plant in cultivation, so the species is polymorphic.—J. Fraser.

Linaria purpurea L. With packets of seed. Up to 3ft. tall, much branched, and in profuse quantity at top of very high garden wall, Clifton, W. Glos, July 14, 1931.. Seeds, Oct. 15. This alien, naturalized on rocks and old walls, is frequent about Clifton and Bristol. "A garden escape which

sows itself persistently in suitable situations." White, *Flora of Bristol*, p. 454. Occasionally we find a colour-form with mauve flowers and nearly white lip. After counting the approximate number of flowers, buds and capsules on the nine flowering spikes of a specimen now mounted and those on three spikes that were removed, and taking an average of 50 seeds per capsule, if all the flowers and buds came to maturity I estimated that at least 31,500 seeds would be produced by this one plant, which was by no means the largest seen on the wall. As usual in seedling plants, the leaves of seedling *L. purpurea* are much broader in proportion to their length than in mature plants. In autumn seedlings four inches high, the leaves are mostly in clusters of three or four, the lower three clusters being 16mm. and 13mm. apart. On May 3, 1932, the new shoots up to 8 inches high and some of the larger seedlings bore verticils of 5 or 6 leaves. Arehangeli (*Fl. Ital.*) says it is perennial (as evidently at Clifton) and the height 3–6 dec. So, even on a high wall, the damper climate of Bristol enables it to attain rather greater dimensions than in Italy.—H. S. Thompson.

Scrophularia alata Gilib. Side of stream, near Compton Abdale, E. Glos., July 4, 1931. With J. W. Haines. Not properly in flower at this early date. Very few taken.—H. S. Thompson.

Veronica polita Fries. Garden, Church End, Finchley, Middlesex. [C 23]. July 20, 1931.—J. E. Lousley. Yes.—E. Drabble. Yes. The flowers are on the larger side. Did Mr. L. take relative measurements when fresh ?—J. E. Little.

Veronica polita Fries. Newton Mill, near Bath, N. Somerset, Nov. 7, 1931. Amidst other Veronicas it was very distinguishable.—H. S. Thompson. Yes.—E. Drabble.

Veronica persica var. *Kochiana* Godr. [2650]. Portishead, N. Somerset. Waste ground by railway siding, June 25, 1931. An upright slender growth among taller vegetation, but on dry ground. Sepals accrescent, tipped with glandular hairs, strong midrib. Capsule very reticulate. Lowest petal white. Corollas small.—H. S. Thompson. Excellent *Kochiana*; the lowest petal may be white or blue.—E. Drabble.

Veronica persica Poir. var. *Aschersoniana* Lehm. [2651]. Newton Mill, near Bath, N. Somerset, July 2, Sept. 29,

and Novem. 7, 1931. On damp, heavy Liassic soil in garden strip by mill-stream. Many still flowering on November 7. Very variable, and some verging towards var. *Corrensiana* Lehm.—H. S. Thompson. Yes, var. *Aschersoniana*.—E. Drabble.

Veronica persica Poir. var. *Corrensiana* Lehm. [2652]. Newton Mill, near Bath, N. Somerset, Sept. 29, and Novem. 7, 1931. In garden strip by stream, growing with var. *Aschersoniana*. On November 7 conspicuous rosettes of leaves and flower-buds at the top of the strong shoots were in evidence. Leaves mostly broad and large, irregularly and doubly serrate-crenate. Corollas of both varieties clearly veined with purple. Stems densely covered with silky hairs, some being quite long, eglandular.—H. S. Thompson. Yes, var. *Corrensiana* Lehm.—E. Drabble. The Sept. gathering: "Yes, but by no means extreme. The double toothing of the leaves is generally much more evident."—E. Drabble.

Euphrasia ———. Berry Head, S. Devon, July 27, 1931. —R. J. Burdon. This Eyebright is somewhat remarkable owing to its very long calyx-teeth and long, narrow capsules. In these features it resembles the Bossington plant referred to at p. 509 of my "Revision of British Euphrasiæ," and also Mr. Rilstone's plant from Perranporth (No. 65) sent to the Club in 1922. It differs from these plants in flowering earlier and from a lower node. Its habitat and early blooming recall *E. occidentalis*, but I do not think it connected with that species. For the present I should leave it under *E. nemorosa* but it may prove to be an established form worthy of varietal or, possibly, specific distinction.—H. W. Pugsley.

Euphrasia nemorosa Löhr. Sandy ground, Shalford Common, Surrey, Sept. 6, 1931. [C 4]. Corolla white, tinged with pale mauve, and with yellow spot on lower lip. This plant attracted my attention by the strong development of the central spike.—J. E. Lousley. Yes, *E. nemorosa* Löhr, near the typical form.—H. W. Pugsley. Yes; the var. *ciliata* Drabble, with fine setulae on the edges of the leaves and calyx.—J. Fraser.

Euphrasia occidentalis Wettst. v. *calvescens* Pugsl. [490]. Durlstone Bay, Swanage, Dorset, July 5, 1931.—H. W. Pugsley.

Euphrasia micrantha Reichb., with lilac flowers (Det. H. W. Pugsley). Wood at Corwen, Denbighshire, v.c. 50, Aug., 1931. N. C. R. Miss E. Armitage. Comm. Ida M. Roper.

Euphrasia Pseudo-Kerneri Pugsl. Banstead Downs, Surrey, Sept. 6, 1931.—E. C. Wallace. Correct.—H. W. Pugsley. The plants are small and but little branched, though correctly named.—J. Fraser.

Euphrasia Pseudo-Kerneri Pugsl. Banstead Downs, Surrey, Sept. 6, 1931. Not typical as the other gathering and some are probably, according to Mr. Pugsley, crossed with *E. nemorosa*.—E. C. Wallace. On looking over these specimens I think that most of them are probably pure *E. Pseudo-Kerneri*, but a few with larger and coarser foliage appear to be crossed with *E. nemorosa*. These plants, however, are all close to *E. Pseudo-Kerneri* and much less clearly intermediate than some gatherings from the Surrey chalk-hills.—H. W. Pugsley. These specimens are stouter and more branched than the other gathering from the same locality, but many of the floral bracts are spreading arcuate, and the flowers have the magnitude of *E. Pseudo-Kerneri*, which I should call it.—J. Fraser.

Bartsia Odontites Huds. var. Rush swamp, Mochras, Merionethshire, Aug. 20, 1931.—E. C. Wallace. This is *B. Odontites* var. *litoralis* (Reichb.) (*B. simplex* Krocker; *Odontites litoralis* Fries), characterized by its simple or subsimple upright stem, broad calyx-lobes and exserted capsules. —E. Drabble. I think a small, unbranched form of var. *verna* (Reichb.). Salmon pointed out the peculiarities of Reichenbach's variety *litoralis* in the Club's Report for 1929–30 (p. 28), and this plant clearly differs in its shorter capsules. —H. W. Pugsley.

Rhinanthus [*major* Ehrh.]. Sharpham Peat Moor, Somerset, June 26, 1931. Growing with or near *R. minor* Ehrh. (some of the plants being difficult to distinguish) at border of ditch and rough drove.—H. S. Thompson. A luxuriant form of *R. Crista-Galli* L. (*R. minor* Ehrh.). In *R. major* the bluish tooth of the upper lip is much longer than in these specimens, and the lower lip is appressed to the upper. This plant has been repeatedly collected on the Somerset peat-moors and several times mistaken for *R. major* (vide Report, 1924–25, p. 303). I found it at Shapwick in 1898 and tried to persuade myself that it was *R. major*.—H. W. Pugsley.

Orobanche minor Sm. Form growing on *Crepis virens*. Roadside, near Freckenham, West Suffolk, July 11, 1931. [C 158]. This appears to be the form of *minor* which has sometimes been referred to *O. Picridis*. However, it is quite unlike the plant accepted under that name on the Continent, and differs considerably from the specimens of Newbould and others who have found authentic *Picridis* in Britain. See also Pugsley in *Journ. Bot.* 1926, 18.—J. E. Lousley. I would say *O. minor*, as I can see only one nerve in the bifid sepals. This species grows on the roots of many Orders of plants.—J. Fraser.

Mentha rotundifolia Huds. Border of ancient cultivation at Shipham, on Mendip, N. Somerset, Aug. 23, 1916.—J. W. White. Yes ; the best form of it, with dense tomentum on the underside of the leaves.—J. Fraser.

Mentha rotundifolia×*spicata* var. *brevifolia* Fraser. Cult. at Sutton, Surrey, from root found at Wheddon Cross, Exmoor, v.c. 5, Aug., 1931.—E. C. Wallace. This is rather the primary or oldest of the three varieties of the hybrid I have described, namely, var. *cordifolia* (Opiz) Fraser. Opiz described it as a species. It is also a long-leaved form of it. I have one such from Cornwall.—J. Fraser.

Mentha longifolia Huds. Right bank of R. Chew, above Pensford, N. Somerset, Aug. 28, 1931. This species is more frequent a few miles lower down the Chew Valley.—H. S. Thompson. Yes ; very vigorous. It has had an excess of rain or moisture from the river, because the anthers are perfect, but the filaments abnormally short.—J. Fraser. The river had recently been in flood.—Ed.

Mentha longifolia×*spicata* (×*M. Nouletiana* Timb.-Lagr.). By Light Railway, Clevedon, N. Somerset, Aug. 12, 1931.—Ida M. Roper. Conforms in every way to the specimens distributed by Mr. J. W. White through the B.E.C. in 1926. It is nearer to the *M. longifolia* parent, just as *M. villosonervata* (Opiz) Fraser is nearer the *spicata* parent. The features of the plant are the very long leaves, and their very deep, irregular serratures.—J. Fraser.

Mentha ———. Wet edge of field, near Ledbury, Hereford, Sept., 1931.—S. H. Bickman. *M. citrata* Ehrh., with the finest heads of bloom I have seen.—J. Fraser.

Mentha aquatica L. Swampy ground in Chew Valley, above Pensford, Aug. 28, 1931. Two small gatherings.—H. S. Thompson. (1) The slender-stemmed Mint, with small leaves and fine serratures from Pensford Marsh is *M. aquatica* L. var. *Ortmanniana* (Opiz) H. Braun. (2) The large plant from swamp at Bye Mills is typical *M. aquatica* L.—J. Fraser.

Mentha rubra Sm. Anstead Brook, Surrey, Sept. 14, 1931. —R. J. Burdon. The typical *M. rubra*, with rounded cuspidate floral bracts.—J. Fraser.

Mentha rubra Sm. Brook, Albury, Surrey, Sept. 20, 1931. —J. Fraser.

Prunella vulgaris L. Colour forms in cream, mauve, and mostly purple-blue, growing with *P. laciniata* above Cheddar, N. Somerset, July 10, 1931. Messrs. Bucknall and J. W. White did not consider similar plants sent to the Club in 1917 were hybrids.—H. S. Thompson.

Prunella laciniata L. Rough, thickety ground above Cheddar, N. Somerset, July 10, 1931.—H. S. Thompson.

Amaranthus retroflexus L. Par, East Cornwall, Oct., 1914. —C. C. Vigurs. Comm. F. Rilstone.

Atriplex glabriuscula Edmondston ? var. *Babingtonii* Moss and Wilmott. Berrow coast, N. Somerset. In some abundance as a ' strand ' plant, Sept. 22, 1931.—H. S. Thompson. From its habit and bracteate inflorescence the single specimen sent has evidently some *A. glabriuscula* in it, but it is probably a hybrid with *A. patula* L., which is less common than the hybrid with *A. hastata*. It is necessary to see the series to understand these hybrids. I would emphasize the fact that Edmondston's name contains two d's ; it is generally misspelt.—A. J. Wilmott.

Polygonum [*patulum* M. Bieb.]. Waste ground, Splott, Cardiff, v.c. 41, Sept. 7, 1931.—A. E. Wade. I originally named this plant *P. Bellardii* All. to which identification Dr. Druce agreed. I follow his list in calling it *P. patulum* M. Bieb.—A. E. Wade. The specimen sent to me appears to be a form of *heterophyllum*. The fruit is distinctly striate, not smooth as in *patulum*. It is quite different from the plant from Newport, I. of Wight, named at Kew, and from Dr,

Druce's Burton-on-Trent plant confirmed by Dr. Danser, which agree well with one another, and are apparently correctly named *patulum*.—E. Drabble. The wrong plant was inadvertently collected. The specimens distributed were *P. heterophyllum* Lindm. var.—A. E. Wade.

Polygonum lapathifolium L. Arable field, Lurgashall, West Sussex, Sept. 13, 1931.—G. M. Ash. The seeds are black in colour, and measured when fresh gave an average of 3mm. in length and 2.6mm. in breadth. Among them were a few trigonous ones. The inflorescence is rather short, very stout, obtuse-ended and erect. The perianth as well as the peduncle and pedicels are glandular. The pink-flowered form of *P. lapathifolium* is a good deal more unusual than the white turning green.—J. E. Little.

Rumex pulcher L. Farmyard at Rodwell, Ouse Valley, E. Sussex, July 5, 1931.—E. C. Wallace. Correct.—E. G. Baker. A frequent plant in and about farmyards.—H. S. T.

Rumex obtusifolius L. Seedlings with cotyledons. Waste ground, Queen's Road, Clifton, W. Glos., May 26, 1931. Fruiting sepals reticulate, and with subulate teeth.—H. S. Thompson. Correct.—J. Fraser.

Mercurialis annua L. Waste ground, Tamworth Lane, near Mitcham Common, Surrey. [B 108]. Oct. 18, 1931. All these 16 sheets were obtained from one large bush about three feet high !—J. E. Lousley.

Salix triandra L. var. *discolor* And. Walton Moor, N. Somerset, Aug. 2 and 24, 1924.—J. W. White. As the leaves are glaucous beneath, this would come under var. *discolor*. N. J. Andersson says the glaucous form of the type is the wild one, and the green-leaved forms are the cultivated ones. —J. Fraser.

Salix fragilis L. × ♂. [739 = 768]. Wallington Park, W. Norfolk. Leaves Sept. 23, 1927. Fl. May 6, 1929.—J. E. Little and K. D. Little. This broad-leaved tree was determined by J. Fraser (See Report 1927, p. 418) as *S. fragilis* × *triandra* : and by Herr R. Görz (Brandenburg-am-Havel) as *S. alba* × *fragilis* f. *excelsior* Host, sub-form *discolor* Kerner, sub-sub-form *latifolia* Meyer. It occurs in various parts of England, as Sussex, Hertfordshire, Bedfordshire, Norfolk, probably

always as a planted tree, on account of the elegance of its wide-spreading branches, broad shining leaves and masses of golden catkins. It may be compared with : (1) *S. fragilis* L. ♂. [592]. (W.E.C.R. 1924, 306 and B.E.C.R. 1925, 1063), for which Herr Görz gave a similar determination, in which Herr K. H. Rechinger (Vienna) concurred : for this however Mr. W. Watson (Kew) gave " *S. decipiens* Hoffm. (perhaps = *fragilis*×*triandra*) " : (2) *S. fragilis* L. (Broad leaves. [629]. W.E.C.R. 1925, 349) : (3) *S. fragilis* L. ♂. [589]. (B.E.C.R. 1924, 736).—J. E. Little.

Salix daphnoides Vill. ♂. [931]. Girls' Grammar School, Hitchin, Herts. Catkins Mar. 25, 1931. Leaves July 21, 1931.—J. E. Little. The origin of this small tree was in a stake sent as support to a flowering almond. The stake grew and the two are now much of a size and intermixed. The twigs in winter are of a beautiful glossy purple, and quite ornamental even in a leafless state. The living tree has no appearance of the ' mould ' on the twigs which gives it the German name ' *Schimmel-Weide* ' : this appears only after a shoot is dried.—J. E. Little. Quite correct. This Willow is much misunderstood in Britain and Ireland by the cultivators, who call it *S. Meyeriana*. The other species of this affinity has much more of the grey wax upon the summer shoots, namely *S. pruinosa*.—J. Fraser.

Salix Caprea L.×*viminalis* forma *rugosa* (Leefe). Walton-in-Gordano, N. Somerset, April, May and Aug., 1899.—J. W. White. Right for *S. rugosa* Leefe ; but as it is only one of the two forms of the hybrid *S. Caprea*×*viminalis*, E. F. Linton put it as f. *rugosa* (Leefe), the other form being *S. mollissima* Sm.—J. Fraser.

Salix cinerea Linn. (Long-styled form). Malden Rushet, Telegraph Hill, Surrey. Catkins April 5 ; leaves Sept. 13, 1931. In the group Caprea, *Salix Caprea* has the most distinct style, but in this form of *S. cinerea* it is decidedly long.—J. Fraser.

Ceratophyllum submersum L. Abundant in a pool connected with the River Yeo, near Congresbury, N. Somerset, Sept. 30, 1926.—J. W. White. In Report 1926–27, p. 398, I suggested that this ancient pond may be the station near Congresbury whence Dillenius recorded the plant in 1726,—H. S. T.

Juncus compressus Jacq. (1) Near Pensford, N. Somerset. Growing thickly and for a considerable distance by a grassy path through meadow of mowing grass not yet mown (July 21, 1931).—H. S. T. Yes.—E. Drabble. (2) A good clump, 20 inches high, Blagdon Reservoir, N. Somerset, Oct. 10, 1931. It is rare in Somerset.—H. S. Thompson.

Juncus effusus×*inflexus*. By a pond (with both parents) on Earlswood Common, Surrey, Aug. 1, 1931.—E. C. Wallace. Yes. The striation of the stem is distinct, and the pith is not chambered but continuous. The top of the capsule is intermediate in character between that of *effusus* and that of *inflexus*. The basal sheaths have partly dried of a duller colour than in some forms of the hybrid, and are more like those of *effusus*, although showing in places the dark shining colour of those of *inflexus*. Was Mr. Wallace able to ascertain the number of stamens, and the form of the anthers ? I believe that these hybrids cannot all be brought under the description of *J. diffusus* Hoppe.—J. E. Little.

Juncus bulbosus L. (viviparous state). Clay pit by roadside, between Cornwood and Cadover, S. Devon, v.c. 3, Sept. 10, 1931.—Coll. R. H. Goode. Comm. G. Goode. *J. bulbosus* var. *uliginosus* Fries ; this variety is often " viviparous."—E. Drabble.

Sparganium simplex Huds. (Fruits). New Forest, Hants., Sept. 20, 1931.—G. M. Ash. Comm. J. E. Little. Correct.—J. Fraser.

Wolffiia arrhiza Wimm. Small pond at North Stoke, West Sussex, June 22, 1931.—E. C. Wallace. *Wolffia arrhiza*, *Lemna minor* and L. *polyrrhiza* in my packet.—E. Drabble.

Potamogeton alpinus Balb. var. *Palmeri* Druce. From last year's station in the canal at Odiham, North Hampshire, but with the addition of fruits which are useful in showing that this plant has no affinities with *P. praelongus* as was once believed. July 18, 1931.—E. C. Wallace. This variety is queried in the *L. C.* list as *alpinus*×*praelongus*, but subsequently Mr. Ar. Bennett gave it as a variety of *P. alpinus*. I have seen all the gatherings of this variety which have been distributed (and many others) but have failed to find any definite evidence of *praelongus*. The entire absence of minute denticulations even on the youngest and most immature

leaves also eliminates both *P. angustifolius* and *P. lucens*. The leaf-shape, the venation, the flat and blunt apex, and the distinctive colour are those of *P. alpinus*. Mr. Wallace's plants, however, afford additional and conclusive evidence of the correctness of the name they bear, for on several of the sheets there were both floating leaves and spikes of mature fruits, each quite distinct from those of any other British species and unquestionably those of *P. alpinus*. So far as my experience goes, this is the first time such complete and valuable proof has been available.—W. H. Pearsall.

Potamogeton lanceolatus Sm. Penrhos Lligwy, Anglesey, v.c. 52, Aug. 3, 1910.—R. H. Goode., comm. G. Goode (*Fide* A. Bennett). This is still given in the *L. C.* list as a species although Hagström (*Crit. Res.* 1916, 149) showed conclusively that the plant was *P. alpinus* × *pusillus*. Fryer and Bennett considered it to be the hybrid *P. heterophyllus* × *pusillus*. As both these species possess leaves with a cuspidate apex, that character would inevitably appear in the hybrid, but on the contrary all its leaves have the margins at the actual tip convex. This gives the leaves the blunt appearance which is so characteristic of *P. alpinus*. Moreover, the lateral nerves near the apex, in both *heterophyllus* and *alpinus*, follow the curve of their respective leaf-margins—so to speak—in *heterophyllus* joining the midrib with the outer curve concave, and in *alpinus* with it convex. In *P. lanceolatus* the lateral nerves turn suddenly inward (with a sharp convex curve) to the midrib, as in *alpinus*. Lastly, in *heterophyllus* the blade of the floating leaves is usually shorter than the petiole which is often very long (8cm.). In *P. lanceolatus* the blade is always longer than the petioles.—W. H. Pearsall.

Potamogeton gramineus var. *fluvialis* Fries. In deep water in the Basingstoke Canal, near Frimley, Surrey, Sept. 13, 1931.—E. C. Wallace. Correctly named.—W. H. Pearsall.

Potamogeton lucens L. Marsh ditches at Iford, Ouse Valley, East Sussex, July 5, 1931.—E. C. Wallace. Clean and beautiful specimens of typical *P. lucens*, a species which is partial to calcareous waters and therefore often encrusted.—W. H. Pearsall.

Potamogeton lucens L. Wey Navigation canal, near Send, Surrey, July 11, 1931. Plants six to ten feet in length, very

crowded and dirty in muddy water. Very fine examples of *P. lucens* L. var. *longifolius* DC. *Fl. Fr.* vi. 1815, 311 (*P. macrophyllus* Wolfg.), not the *P. longifolius* of Bab. (*Man.* 440) which is *P. Babingtonii* Ar. Benn. (*P. lucens* × *praelongus*). —W. H. Pearsall.

Potamogeton perfoliatus L. Pond at Loxwood, by the old Wey and Arun Canal, West Sussex, Aug. 2, 1931. In deep, cloudy water near edge of pond.—E. C. Wallace. Yes, the var. *ovatifolius* Wallr. *Sched. crit.* 1822, 66, (var. *ovatus* Rchb.), the common form of calcareous habitats.—W. H. Pearsall.

Potamogeton crispus L. form with nearly entire leaves. In a rhine on Sharpham Peatmoor, Somerset, June 26, 1931. —H. S. Thompson. This is a rather broad-leaved form of this species—var. *obtusifolius* f. *latifolius* Fieber (*Potam. Böhm.* 32, 1838) which is the *P. crispus* a. *genuinus* Rchb. *Icones* 18, 1845, and *P. crispus* f. *typicus* of Tiselius.—W. H. Pearsall.

Potamogeton Friesii Rupr. Basingstoke Canal, Odiham, N. Hants., v.c. 12, July 18, 1931.—E. C. Wallace. Leaves narrower than in the following and mostly 3-nerved. In both Mr. Wallace's gatherings of this species the fruits are well-developed and most interesting as they show the distinctive backward bend of the style—toward the dorsal margin—and the persistent stigma which together form the rather conspicuous subcapitate 'beak.'—W. H. Pearsall.

Potamogeton Friesii Rupr. Marsh ditches, Iford, Ouse Valley, E. Sussex, v.c. 14, July 5, 1931.—E. C. Wallace. Good fruiting examples of this species. Leaves 5-nerved.— W. H. Pearsall.

Potamogeton pusillus L. Poaka Beck Reservoir (inlet), N. Lancs., v.c. 69 b, July 13, 1913, Sept. 10, 1913, Aug. 21, 1919 (f. *acutissimus* Hagstr. (teste J. O. Hagström) and Sept. 13, 1919, Pond at Green Haume, Dalton, N. Lancs., Oct. 17, 1913.—W. H. Pearsall.

Potamogeton pusillus L., sub-sp. *lacustris* Pearsall. Ullswater Lake, Westmoreland, v.c. 69, Aug. 13, 1919. Pull Wyke Bay, Windermere, N. Lancs., v.c. 69b, Aug. 24, 1919. Crummock Water, Cumberland, v.c. 70, Sept. 8, 1919. Esthwaite Water, N. Lancs., Sept. 20, 1919 and Sept. 3, 1921. Coniston Lake,

N. Lancs., Sept. 27, 1919. All have been seen by Dr. J. O. Hagström.—W. H. Pearsall.

Potamogeton trichoides Cham. et Schlecht. Marsh ditches at Iford, East Sussex, July 5, 1931.—E. C. Wallace. Good fruiting plants ; some of the peduncles are over 8cm. in length. —W. H. Pearsall.

Potamogeton pectinatus L. Swift chalky stream by cement works, Cliffe, West Kent, Sept. 26, 1931. Bright green and clean plants, a contrast to the *pectinatus* of the brackish ditches on the near-by marshes.—E. C. Wallace. Very clean specimens of the var. *diffusus* of this species.—W. H. Pearsall.

Scirpus pauciflorus Lightf. Shapwick Peatmoor, N. Somerset, Sept. 7 and 18, 1931. Scattered in several rough and damp enclosures near Canada Farm. First record for Somerset, where strangely rare, was June, 1888, Shapwick Heath, Mrs. Gregory. Roots with ± horizontal, filiform, pale rhizomes. Sheaths truncate. Some of these specimens have a long bract at base of fl. head.—H. S. Thompson.

Scirpus triqueter L. Just above Kew Bridge, Surrey. [Ref. C 10] Sept. 5, 1931. The most luxuriant plants of this species which I have ever seen. They fall under var. *vulgaris* Doell.—J. E. Lousley. The sheets included with these specimens bear impressions of the stem section of the plant taken about 10cms. from the base of the stem, and are intended to show its acutely triquetrous shape. This is also indicated by the splits which appear in the stems during pressing. The rhizomes are worthy of study and comparison with those of *S. lacustris* and ×*S. carinatus*.—J. E. Lousley. Has long been there, favoured by the brackish, tidal water. The impressions of the cross section of the stem will be useful to go with the dried specimens.—J. Fraser.

Scirpus triqueter L. Banks of the Thames, near Barnes Bridge, Surrey, Aug. 8, 1931. Growing with *S. carinatus* Sm. (of which a specimen or two were sent).—E. C. Wallace.

Scirpus compressus Pers. North Warnborough Marsh (in thousands), North Hampshire, July 18, 1931.—E. C. Wallace. Very vigorous specimens.—J. Fraser.

Cyperus longus L. Near Braunton, N. Devon, Sept. 11, 1913. Legit Dr. Elliston-Wright ; dried by H. S. T.

Rynchospora alba Vahl, with axillary buds at the rootstock. Shapwick Peatmoor, Somerset, Sept. 7 and 18, 1931.—H. S. Thompson. Beautiful material, showing the axillary buds which will produce next year's plants. The growth from year to year is thus really sympodial, though each year's growth usually dies away, leaving only the axillary bud to continue growth in the next season.—E. Drabble.

Schoenus nigricans L. Shapwick Peatmoor, Somerset, Sept. 7, 1931. In fair quantity in two wet enclosures. There are few stations for it in Somerset.—H. S. Thompson.

Cladium Mariscus Brown. Shapwick Peatmoor, Somerset, Sept. 7, 1931. Two large colonies much increased in area since discovered by Mr. J. W. Haines in 1915. Until Mr. Hy. Corder found a clump on the moor near Catcott in 1910, the same year that E. S. Marshall saw it abundantly near Wiveliscombe in West Somerset, there was no record for *Cladium* in Somerset since Sole's MS., 1782. For possible explanation of this see White in *Journ. Bot.* 1918, p. 83, who refers to Yapp's paper in *New Phytologist*, 1908, p. 60.—H. S. Thompson.

Carex disticha Huds. Swamp by Odiham Castle, North Hampshire, July 18, 1931. A similar gathering to that from Dungeness last year. See Report 1930–31, p. 86.—E. C. Wallace. Yes; widely distributed in Britain, but local in my experience.—J. Fraser.

Carex vulpina var. *nemorosa* (Rebent.). [2664]. Corner of two roads, south of Whitchureh, N. Somerset, June 15, 1931. Growing with *C. contigua*, as in 1922 and 1925. Some of those collected are very variable, and several sheets [2663] I believe to be *C. contigua*×*vulpina*. See Report 1924–25, p. 314, and 1925–26, p. 355.—H. S. Thompson. I see only the typical species in this: the braets are too short for *nemorosa*.—H. W. Pugsley. Cf. W.E.C.R. 1924, 314, where C. E. Salmon says of a plant from the same station "Perhaps." It would be a great help to have the plant in more stages than one. The spike is interrupted (Cf. Miss Roper's plant, W.E.C.R. 1930, 86), but the glumes are distinctly brown in colour. Should not var. *nemorosa* have a much laxer spike and paler glumes? —J. E. Little. Although gathered on June 15, the perigynia are rather soft and squeezed up flat. The stem is quite compressed, and both it and the leaves are much less scabrous

than usual. In 1916, I gathered a bit of a plant on 13th June, and the stem flattened in drying, while the spikes had two and three interruptions. I gathered another piece of the same plant on 26th June, and the stem has remained triquetrous, while the spike closed up. I do not say that the specimen from Whitehurch is wrongly named, but would have cultivated a root in an open situation to see if it retained its characters.—
—J. Fraser.

Carex contigua Hoppe ? [2660]. First gathering, July 20, 1931. Railway bank, Brislington, N. Somerset. Stems thin and wiry. Utricles 3–3.5mm.—H. S. Thompson. I would say that my specimens are *C. contigua* because the perigynia are scabrous on the edges of the beak but not lower down. The specimens must have been starved in a very dry situation. I have no quite similar specimens.—J. Fraser. I would suggest that this is *C. Pairaei* Schultz.—A. J. Wilmott. These (2660 and 2661) are both *C. Pairaei* F. Schultz, but the fruits in the accompanying envelopes are different and belong to *C. contigua* Hoppe.—H. W. Pugsley.

Carex contigua Hoppe. [2661]. Second gathering, Aug. 25, 1931. Railway bank, Brislington, N. Som. Great clumps beaten down by the wind and rain, with slender fruiting stems 3–4ft. long. Utricles glossy 5.5–6.0mm. long, with a beak of nearly 2mm. Leaves more filiform than usual. I regret the confusion of fruits and possibly labels in these two gatherings.—H. S. T. The fruits sent me seem right.—
J. E. Little.

Carex contigua × *vulpina* ? [2663]. Growing with both parents at corner of two roads S. of Whitehurch, N. Somerset, June 15, 1931. See Report 1924–25, p. 314, and Report 1925–26.—H. S. Thompson. The sheet received shows two different plants : (1) *C. vulpina* L. with very brown spikelets, and (2) very young *C. contigua* Hoppe. I cannot see any symptom of hybridity in either specimen.—H. W. Pugsley.

Mr. Thompson's label refers to a gathering of 1922, of which I can find no notice in the Report of that year. But in Report 1924–1925, p. 314, his gathering [4423] from the same locality is commented upon. (The 1922 specimens were not sent in until 1924.—H. S. T.). Would he kindly summarise for the Report the points of the respective species which he finds combined in the hybrids ?—J. E. Little.

In Report 1925–1926, p. 355, Mr. Little himself compared the two years gatherings better than I could do. I regret that I can say nothing further, but shall try to get a botanist to see with me these plants *in situ* later in the summer than June.—H. S. T.

Carex binervis Sm. (Fruits). [795]. Black Down, W. Sussex, Aug. 17, 1928.—J. E. Little and R. J. Burdon. The fruits are as Smith described them, with a broad smooth beak. In three other books the beak is described as scabrid or rough at the edges.—J. Fraser.

Carex extensa Good. Border of salt marsh, Berrow, N. Somerset, July 16, 1931. From huge clumps, one being three feet across. Some of the specimens have (what Coste calls in *Carex*) gynobasic heads of fruit on short filiform stems springing from a leaf-sheath 10 and 12 inches below the other flower-heads. Some heads have six divisions and the lowest one branched again.—H. S. Thompson. White (*Fl. Bristol*, 1912), was doubtful whether *C. extensa* still existed at Berrow, so the specimens are especially welcome.—J. E. Lousley.

Setaria viridis Beauv. (Fruits). Waste ground, Riddy Lane, Hitchin, Herts., Oct. 11, 1930.—J. E. Little. The caryopsis or fruit is very finely punctate on the back like that of *S. verticillata*, but the spike is like that of *viridis*, and right for the species.—J. Fraser.

Apera Spica-venti Beauv. Berrow sands, in the strand zone, N. Somerset, July 16, 1931. Panicles up to 19cms. or 20cms., i.e. rather smaller than usual. But this is not *A. interrupta*, which a friend reports *in lit.* having seen at Berrow.—H. S. Thompson. Correct.—W. O. Howarth.

Avena strigosa Schreb. In oat stubble by road from St. Brelade to Don Bridge, Jersey, Aug. 29, 1930.—I. A. Williams. L. V. Lester-Garland, in his *Flora of Jersey*, 1903, p. 158, records this plant only in the "List of Errors, Ambiguities, and Plants recorded for Jersey on Insufficient Authority," his sole record being that of Professor La Gasca, of Madrid, in 1839. In 1930, however, I found *A. strigosa* to be quite frequent in field-borders, sandy roadsides, etc., at any rate in the Western portion of the Island.—I. A. W. Correct.—W. O. Howarth. It is *A. strigosa* Schreb. sub-sp. *glabrescens* Marquand, var. *albida* Marq.—J. Fraser.

Koeleria vallesiana from Uphill and Purn Hill, 1931.—H. S. T. Excellent specimens ; agrees well with the Swiss material sent by Dr. Walo Koch.—E. Drabble.

Poa Balfourii Parn. Ben Creachain and Ben Dothaidh, Argyle, May 26, 1893, Aug. 2, 1898.—W. A. Shoolbred. Comm. Nat. Mus. of Wales.

Glyceria distans Wahlb. Salt Marsh, Littlehampton, West Sussex, Aug. 3, 1931. Of interest in view of Mr. Salmon's paper in *Journ. Bot.* 1929, 243.—E. C. Wallace. Correct.—W. O. Howarth. Correct, with its spreading and declining main branches of the panicle.—J. Fraser.

Glyceria distans (L.) Wahl. Bank of R. Rhymney, Cardiff, Glamorgan, Sept. 6, 1931.—A. E. Wade. Good examples of this grass, poorly described in many floras. The ligule is usually given as ' short and truncate ' ; it is short but often 2mm. in length, tapering to a rounded apex having a sub-acute and apiculate point. In older leaves the ligule becomes lacerate and truncate at the summit. The spikelets are ciliate at the base, with the outer pale slightly longer than the inner, oblong-oval, ciliate at the back and strongly denticulate at the apex with the dorsal vein slightly excurrent. The inner pale also is denticulate but the mid-vein not excurrent. —W. H. Pearsall. Correct.—W. O. Howarth.

Festuca Myuros L. and *F. bromoides* L. for comparison. About railway siding, Portishead, N. Somerset, June 25, 1931. —H. S. Thompson. Correct.—W. O. Howarth.

Festuca capillata Lam. Sandy soil, Mitcham Common, Surrey. [C 20]. June 27, 1931.—J. E. Lousley. Correct.—W. O. Howarth. Yes.—J. Fraser.

Festuca rubra ? var. *pruinosa* (Hack.) Howarth. [2699]. On and at foot of low Lias Cliffs, South of Battery Point, Portishead, N. Somerset, June 25, 1931. Very variable. This seems to agree with what Mr. Howarth named *pruinosa* from Weston-s-Mare, 1924 (H. S. T.), Report, W.B.E.C., p. 319 ; but to me they both appear nearer a form of *F. ovina* !—H. S. Thompson. Correct.—W. O. Howarth. The awns are too short for *F. ovina*, and the specimens have the short stolons of *F. rubra*.—J. Fraser.

Festuca arundinacea Schreb. var. *strictior* Haek. ? [2848]. Cf. also *F. juncifolia* St. Am. Berrow sands, N. Somerset ; just above high water ; July 16, 1931. Leaves short, rigid and *sharply pointed.* Whole plant rigid and unusual in aspect. *Tips* of leaves scabrid. Branches of paniele in pairs. Ligule short and truncate, if any. I have a more or less typical *F. arundinacea* Sehreb. from the same streteh of sands, gathered the same day.—H. S. Thompson. Correct.—W. O. Howarth.

Bromus erectus Huds. Froeester Hill, E. Gloueester, June 20, 1931. Much branehed *stiff* form of foliage, everywhere apparent there, and due perhaps to the wet season. Normal filiform root-leaves also sent. Sueh particularly stiff vegetative growths have not been observed about Bristol where the plant is so common, though a few sueh were seen on July 5th in a pasture near Hueelecote, E. Glos.—H. S. Thompson. Yes. —E. D. Correct.—W. O. Howarth. The flowerless shoots with short, stiff, distiehous leaves are vegetative growths whieh appear abundantly in the autumn after the plants have shed their fruits. Oeeasionally a few of these growths ean be found while the plants are in full bloom.—J. Fraser.

Bromus erectus Huds. showing vegetative growth of barren shoots. Froeester Hill, E. Gloster, June 20, 1931.—Ida M. Roper. Correet.—W. O. Howarth. Observed and eollected independently of H. S. T., though both were immediately struck by the eurious and copious growth on the hillside.—Ed.

Mr. E. C. Wallaee thinks that " in these two gatherings the so-called leafy shoots are nothing but normal flowering stems attaeked by a fungus. Many species of grass are similarly galled." And later he wrote : " When I first saw the queer *Bromus* I pulled a stem to pieces, finding leaves deformed by fungus and black in colour . . . . More anon."

Mr. J. Ramsbottom, Keeper of Botany, British Museum (Nat. Hist.) writes to Mr. Wallaee : " The speeimen of *Bromus erectus* Huds, which you send labelled Frocester, E. Glos., June, 1931, H. S. Thompson, is attaeked by the smut fungus *Ustilago striaeformis* (West) Niessl. This fungus is not uncommon on *Bromus erectus.*"

Bromus secalinus L. var. *velutinus* (Sehrad.). Very plentiful in an oat field, near Headley, Surrey, July 17, 1931. The common British form of this grass, I think.—I. A. Williams.

Correct.—W. O. Howarth. Yes ; the common British form of this species in cornfields and stackyards.—J. Fraser.

Bromus pratensis Ehrh. (*B. commutatus* Schrad.). Meadows near Egham, Surrey, v.c. 17, June 14 and 28, 1931. Ehrhart's name is the oldest for this grass. The second date of collecting was rather too late for the spikelets to remain intact, though they are all the better for examination.—J. Fraser. Correct. —W. O. Howarth.

Bromus pratensis Ehrh. (*B. commutatus* Schrad.). In a sainfoin field, near Headley, Surrey, Sept. 26, 1931.—I. A. Williams. A secondary autumnal growth. This form of arable land, with usually large spikelets, looks rather different from the form which grows, for example, in Chertsey Mead, of which I distributed specimens in 1929.—I. A. W. I think it is *B. pratensis* Ehrh., but it is very abnormal. Gathered so late as Sept. 26, the secondary growths of spikelets were soft and got unduly spread out in drying. The stalks of the branches are too short, with other anomalies. I have a cut back plant that produced 15–20 stems, and was gathered on July 5. The spikelets are quite normal like those gathered in meadows in the Thames valley, by the middle of June.—J. Fraser. Yes ; this appears to be a secondary autumnal growth on arable land. I feel that these Bromes need very careful revision.—W. O. Howarth.

Bromus molliformis Lloyd. By the path to the Lighthouse, South Stack, Holyhead, Anglesey, June 11, 1931. [C 202].—J. E. Lousley. Correct.—W. O. Howarth. Correct ; Coste says the stems are glabrous. None of my specimens on this occasion have them so, but one collected in Cornwall in 1929 is wholly glabrous except some of the lowest leaves.—J. Fraser.

Agropyron repens Beauv. var. *lasiorachis* Hackel. Fyfield, S. Essex, July 27, 1930. [C 36].—J. E. Lousley. Correct.—W. O. Howarth. The spikes are denser than others from Jersey, otherwise they are the same.—J. Fraser.

Lastrea Thelypteris Bory. Tall form, up to 3 feet 9 inches ! with (mostly) narrow fronds ; growing in water beneath bushy border of a peat drove. Shapwick Peatmoor, Somerset, Sept. 7, 1931. The longest specimen collected and sent to the Club was 23 inches to first pinna and the frond 22 inches, total 3 feet 9 inches.—H. S. Thompson. A sheet from Glamorgan has the frond nearly twice as wide.—J. Fraser. Many examples growing on the Turfmoor last year had fronds more than twice as wide as the narrowest of these.—H. S. T.

FLORA HELVETICA.

PLANTS CONTRIBUTED BY DR. WALO KOCH.

Ranunculus fallax (*Wimm. und Grab.*) Freyn. "Hubenwies," bei Rümland (Kt. Zürich). Geranium palustre-Filipendula Association. 425 m.s.m., May 13, 1931.—Leg. Walo Koch.

Fumaria Vaillantii Loisel. Schuls im Unter-Engadin, auf Oedland. Ca. 1290 m.s.m., July 20, 1931.—Leg. Walo Koch.

Capsella pauciflora Koch. Ruine Tschanüf bei Remüs (Unter-Engadin). Ca. 1230 m.s.m., July 20, 1931.—Leg. Walo Koch.

Astragalus Onobrychis L. An der Strasse ob Remüs, (Unter-Engadin) gegen Val Sinestra, Trockenrasen. Ca. 1400 m.s.m., July 20, 1931.—Leg. Walo Koch.

Potentilla Gaudini Gremli var. *virescens* Th. Wolf. Alluvion der Limmat unterhalb Dietikon am linken Ufer südl. der Reppischmündung, Sandboden. Ca. 390 m.s.m., May 12, 1931.—Leg. Walo Koch.

Sorbus Chamaemespilus (L.) Crantz. Kt. Graubünden: Hinterwald bei Arosa. Ca. 1800 m.s.m., June 21, 1931.—Leg. Frau E. Koch. Comm. Walo Koch.

Bupleurum longifolium L. Kanton Aargau: Südhang der Lägern bei Wettingen. Quercus sessiliflora-Niederwald, Malm. Ca. 700 m.s.m., June 6, 1931.—Leg. Walo Koch.

Galium rubioides L. Auenwald an der Limmat unterhalb Dietikon bei Zürich. Ca. 390 m.s.m. Einzige Stelle in der Schweiz! July 8, 1931.—Leg. Walo Koch.

Galinsoga hispida (DC.) Hieron. Culta in horto nostro e seminibus unius plantae a cl. Dr. med. E. Sulger Büel in loco Milchbuck prope Turicum inventae anno 1930. Aug. 17, 1931, Oct. 27, 1931.—Leg. Walo Koch.

Euphorbia maculata L. Kanton Tessin; Unkraut zwischen Strassenpflaster in Locarno. Ca. 200 m.s.m., Sept. 6, 1931.—Leg. Walo Koch.

Euphorbia nutans Lagasca. Kanton Tessin; Strand des Luganersees bei Melide. Ca. 275 m.s.m., Sept. 9, 1931.—Leg. Walo Koch.

Aceras anthropophorum (L.) R. Br. Kanton Wallis : Les Follaterres bei Brançon, Waldliehtungen. Ca. 650 m.s.m., May 24, 1931.—Leg. Walo Koch.

Juncus acutiflorus Ehrh. ×*J. articulatus* L. Kanton Zürich : Glattal bei Glattbrügg ; Molinietum. 425 m.s.m., Aug. 25, 1931.—Leg. Walo Koch.

Juncus acutiflorus Ehrh. × ü. *fusco-ater* Schreber. Kanton Zürich : Glattal bei Rumlang : Molinietum. 425 m.s.m., Aug. 8, 1931.—Leg. Walo Koch.

Fimbristylis annua (All.) R. and S. Kanton Tessin : Maggiadelta bei Locarno. Feuchte Wege im Cyperetum flaveseentis. Ca. 200 m.s.m., Sept. 5, 1931.—Leg. Walo Koch.

Schoenoplectus mucronatus (L.) Palla. Kanton Tessin : Ufer des Lugancrsees bei Maroggia. Bidens tripartitus-Ass. 275 m.s.m., Sept. 9, 1931. —Leg. Walo Koeh.

Eleocharis atropurpurea (Retz.) Kunth. Kanton Tessin : Maggiadelta bei Loearno. Feuchter Sand. Ca. 200 m.s.m., Sept. 5, 1931.—Leg. Walo Koch.

Schoenus ferrugineus L. ×*nigricans* L. =*S. Scheuchzeri* Brügger. "Einfang" bei Maur am Greifensee (Kant. Zürich) ; inter parentes. 440 m.s.m., June 26, 1931.—Leg. Walo Koeh.

Koeleria vallesiana (All.) Bertol. Kanton Wallis : Les Follaterres bei Brançon. Koelerietum vallesianae. 500 m.s.m., May 24, 1931.—Leg. Walo Koch.

Festuca glauca Lam. Kanton Aargau : Südhang der Lägern bei Wettingen. Malm. Ca. 750 m.s.m., Junc 6, 1931. —Leg. Walo Koch.

Festuca vallesiaca Gaudin. Kanton Wallis : Südhang des Tourbillon bei Sitten. Ca. 600 m.s.m., May 26, 1931.—Leg. Walo Koch.

Bromus squarrosus L. Kanton Wallis : Les Follaterres bei Brançon. Wegränder. Ca. 480 m.s.m., May 24, 1931.—Leg. Walo Koch.

Ephedra helvetica C. A. Meyer. Kt. Wallis : Südhang des Tourbillon bei Sitten. Ca. 520 m.s.m., May 26, 1931.—Leg. Walo Koch,

SUBSCRIPTIONS, 1931.

	s.	*d.*
Ash, G. M.	10	6
Barton, W. C.	10	6
Bergens Museum	10	6
Bickham, S. H.	10	6
Biddiseombe, W.	10	6
Bishop, E. B.	10	6
Botanical Dept., British Museum	10	6
Botany School, Cambridge	10	6
Burdon, Preb. R. J.	10	6
Carr, Prof. J. W.	10	6
Catcheside, D. G.	10	6
Crosfield, A. J. (the late)	10	6
Dell, J. A.	10	6
Dickinson, Miss D. K. L.	10	6
Drabble, Dr. E.	10	6
Druce, F.	10	6
Evans, Dr. A. H.	10	6
Ewing, Mrs.	10	6
Fraser, J.	10	6
Geldart, Miss A. M.	10	6
Goode, G.	10	6
Gray, Dr. H.	10	6
Gregor, Rev. A. G.	10	6
Haines, J. W.	10	6
Hall, L. B.	10	6
Hanbury, F. J.	10	6
Holden, Prof. H. S.	10	6
Howarth, W. O.	10	6
Institut für spezielle Botanik, Zürich (Dr. Walo Koch)	10	6
Little, J. E.	10	6
Lousley, J. E.	10	6
Martin, Rev. W. K.	10	6
Matthews, Prof. J. R.	10	6
National Museum of Wales	10	6
National Museum, Dublin	10	6
O'Loughlin, J. L. N.	10	6
Pearsall, W. H.	10	6
Pugsley, H. W.	10	6
Ransom, F.	10	6
Rilstone, F.	10	6
Roper, Miss I. M.	10	6
Simpson, N. D.	10	6
Skene, Dr. M.	10	6
Smith, Prof. W. W.	10	6
S. London Bot. Inst.	10	6
Thompson, H. S.	10	6
Thurston, E.	10	6
Wallace, E. C.	10	6
Wedgwood, Mrs.	10	6
White, J. W.	10	6
Williams, I. A.	10	6
Wolley-Dod, Lt.-Col. A. H.	10	6
Wright, F. R. E.	10	6
	£27	16	6

TREASURER'S BALANCE SHEET, 1931.

Receipts.	£	s.	d.
Balance in hand, December 31st, 1930 ...		10	7
Subscriptions for 1931	27	16	6
Reports sold		17	6
Donation for plate		10	6
	£29	15	1

Expenditure.	£	s.	d.	£	s.	d.
Printing—						
Forty-seventh Annual Report (200 copies) 48 pages and wrapper, with insertion of plate	24	1	3			
200 copies of plate ...		10	6			
Card and postage		9	6			
				25	1	3
Working Expenses—						
Distributor	1	8	6			
Secretary : Envelopes and postage of Reports ...		13	9			
,, Part ordinary postage		10	6			
				2	12	9
Balance in hand, December 31st, 1931 ...				2	1	1
				£29	15	1

31*st December*, 1931.

G. GOODE,
Hon. Treasurer.

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Lt.-Col. A. H. Wolley-Dod, Berkeley Cottage, Mayfield, Sussex.

HONORARY MEMBER.

James Groves, F.L.S., Trevarthian, Freshwater Bay, Isle of Wight.

Vol. IV., No. 4.

THE

FORTY-NINTH ANNUAL REPORT

OF THE

WATSON

Botanical Exchange Club

1932—33

Referees :

H. W. PUGSLEY, B.A., F.L.S., 81, Alexandra Road, Wimbledon, S.W. 19.

Rev. H. J. RIDDELSDELL, M.A., A.L.S., Bloxham, Banbury.

ERIC DRABBLE, D.Sc., F.L.S., Elmcroft, Totland Bay, Isle of Wight.

Distributor and Hon. Treasurer :

GEORGE GOODE, M.A., Lyndhurst, 63, De Freville Avenue, Cambridge.

Hon. Secretary and Editor :

H. STUART THOMPSON, A.L.S., 11, Buckingham Place, Clifton, Bristol 8.

BRISTOL :
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THE WATSON
Botanical Exchange Club

REPORT FOR 1932—33

List of Contributors

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G. M. Ash ...	... 62	H. W. Pugsley	... 32
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J. Fraser ...	... 103	H. S. Thompson	... 427
G. Goode ...	... 30	E. C. Wallace ...	... 246
L. B. Hall ...	... 31	J. W. White (the late)	198
Dr. Koch ...	... 250	Lt.-Col. A. H. Wolley-Dod	... 18
J. E. Little ...	... 181		
J. E. Lousley	... 91		
Nat. Mus. of Wales	... 41	Total	2183

Seed Packets: J. E. Little - - 152.
H. S. Thompson - 10.

Though fewer than last year, the plants sent to the Club were mostly well selected and carefully dried (some conspicuously so), and well maintain the high standard of the Club. A few of the large critical genera, including *Rubus*, *Rosa*, *Hieracium*, *Salix*, *Potamogeton*, and *Chara* were almost or entirely neglected. May we hope that next year, when we reach the jubilee of the Club's existence, we may have a record number of plants to distribute. There are still many hybrids that would be acceptable to members, and, amongst other plants, *Andromeda polifolia* and any *Pyrolae* would be welcome.

To our general Referees (Messrs. Drabble and Pugsley) and to Messrs. E. G. Baker, J. Fraser, W. O. Howarth, J. E. Little, J. E. Lousley, W. H. Pearsall, Miss Roper, H. S. Thompson and A. J. Wilmott we again tender our very grateful thanks for their many interesting and valuable notes. Also to Prof. Danser of Groningen for kindly examining *Rumex*.

G. GOODE,
Distributor, 1932–33.

For a second time we owe a debt of gratitude to our Treasurer, Mr. Goode, for having managed the Distribution so efficiently; and notwithstanding the anxiety he is feeling owing to his wife's sad state of health. The number of parcels he packed and sent off was enormous. If his own health permits, Mr. Goode hopes to distribute a third and last time. Parcels should be sent to him by December 1.

I would express my thanks to Dr. Drabble for carefully and promptly reading and advising upon the first proof, at a time when unfortunately his health was far from satisfactory; and to Mr. Pugsley for reading a final proof. We also sympathise with Mr. Little, who has done so much for the Club, in his long illness which confines him to a room upstairs.

In the passing of Mr. J. W. White, Mr. Spencer H. Bickham, and Mr. James Groves, the Club suffers a very severe loss. We are indebted to Mr. Pugsley for an admirable notice of the last named botanist: and to the *Journal of Botany* for allowing us to reproduce the photograph.

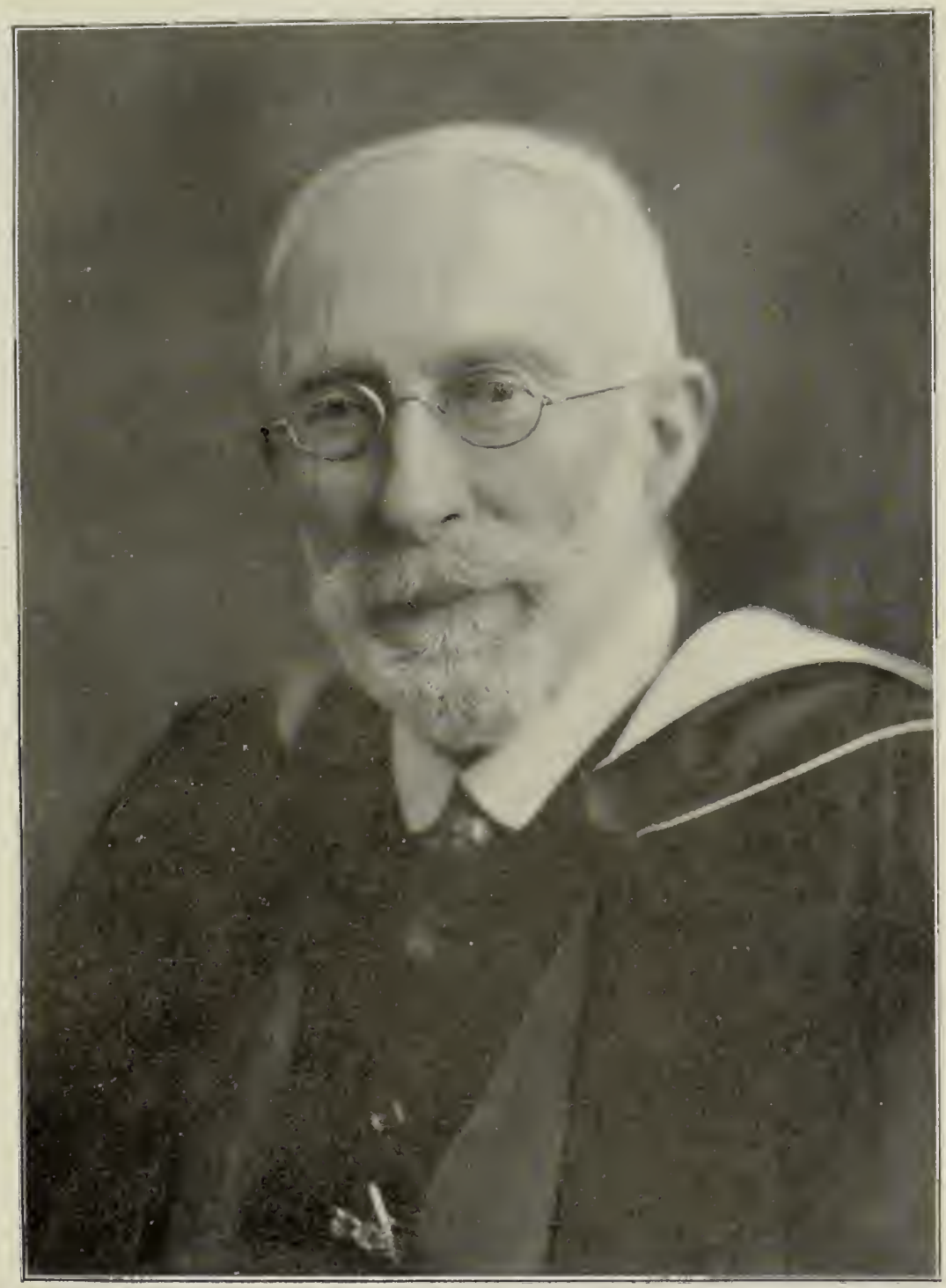
The second interesting series of Swiss and two German plants sent by Dr. Walo Koch have been much appreciated by some of our members and at several public Herbaria.

H. S. THOMPSON,
Hon. Sec. and Ed.

May 20, 1933.

James Walter White (1846–1932).

There was a pathetic interest for this Club in the passing (at the age of 86) of J. W. White, F.L.S., Hon. M.Sc. (Bristol) on October 26, 1932, after a lingering illness; for that morning a parcel of dried plants addressed to Mr. Goode as Distributor was found in his study. And the last of his letters seen by the writer was also to our Treasurer, and dated Sept. 5, 1932. It ended "Please excuse this pencil. My sight has failed until I can hardly see what I am writing." The letter begins "I am sending two years subscription to the Watson Club, although it seems extremely doubtful if I shall be here when the second year dawns. But I am interested in the Club, and sympathize with your financial endeavours . . . I could send you another parcel of spare specimens, but I hesitate thinking that you may find it a troublesome matter to distribute them usefully . . ." All this was characteristic of our departed friend.



Yours sincerely
Jas. W. White

By his death Bristol and the West of England loses its leading systematic botanist, and England one of the best of the old type of field-botanists. He was always happy when collecting and examining plants in the field, both in the British Isles and on the Continent, where in the company of his friend Cedric Bucknall, and once or twice with David Fry or C. E. Salmon, he made a number of visits to the Alps, the Riviera, Spain, the Eastern Pyrenees and the Balearic Isles.

Born in London, August 8, 1846, White went to Dorchester in 1851, and was at school under William Barnes the Dorset poet. At about 14 he was apprenticed to T. B. Groves, pharmaceutical chemist at Weymouth, where he came under the influence of W. B. Barrett, the botanist. Thence he went as an assistant at Allen and Hanbury's, where Daniel Hanbury was encouraging and sometimes invited him to his house at Clapham Common. A few years later he started in business himself at Hampton-on-Thames, and on his 25th birthday was married to Miss Mary Naldrett, who, with their seven sons and four daughters, survives him. In 1931 Mr. and Mrs. White celebrated their Diamond Wedding.

In 1874 he was invited by a fellow-student at Hanbury's to take over the important chemist's business at Clifton of Giles & Sons, since well-known as Giles, Schacht & Co. In his student days White had won the Pharmaceutical Society's medal for the best herbarium. Numerous British and Continental botanists have appreciated his beautifully prepared specimens ; and readers of the ' Pharmaceutical Journal ' and other periodicals have enjoyed his racy articles, including those descriptive of botanical tours abroad.

White joined the Bristol Naturalist's Society in 1878, and was President 1907–09. He wrote for the Jubilee Report " Fifty Years of Botany in Bristol." Reference is made there to the Botanical Club founded in 1903 by the late G. Brebner. The informal meetings of this little Club were held for a number of years at Mr. White's house in Woodland Road.

His *Flora of the Bristol Coal-field* appeared in six yearly parts of the Bristol Nats. Soc. Proc. from 1881 ; and in 1886 it was published in book form. Many papers subsequently appeared in the above Proceedings and in the *Journal of Botany*. Some of the earlier were in collaboration with D. Fry, and afterwards often with Bucknall.

All this and much more work culminated in his *magnum*

opus, The Flora of Bristol, 1912. In the opinion of not a few competent to judge, this is one of the best works of its kind. It excels particularly in its admirable and full introductory matter and the interesting notes under many of the species. We know no British or local 'Flora' which gives habitats (as distinct from localities) so accurately. Copious supplemental notes and records have since been published both in Journ. Bot. and in the Bristol N. S. Proeeedings.

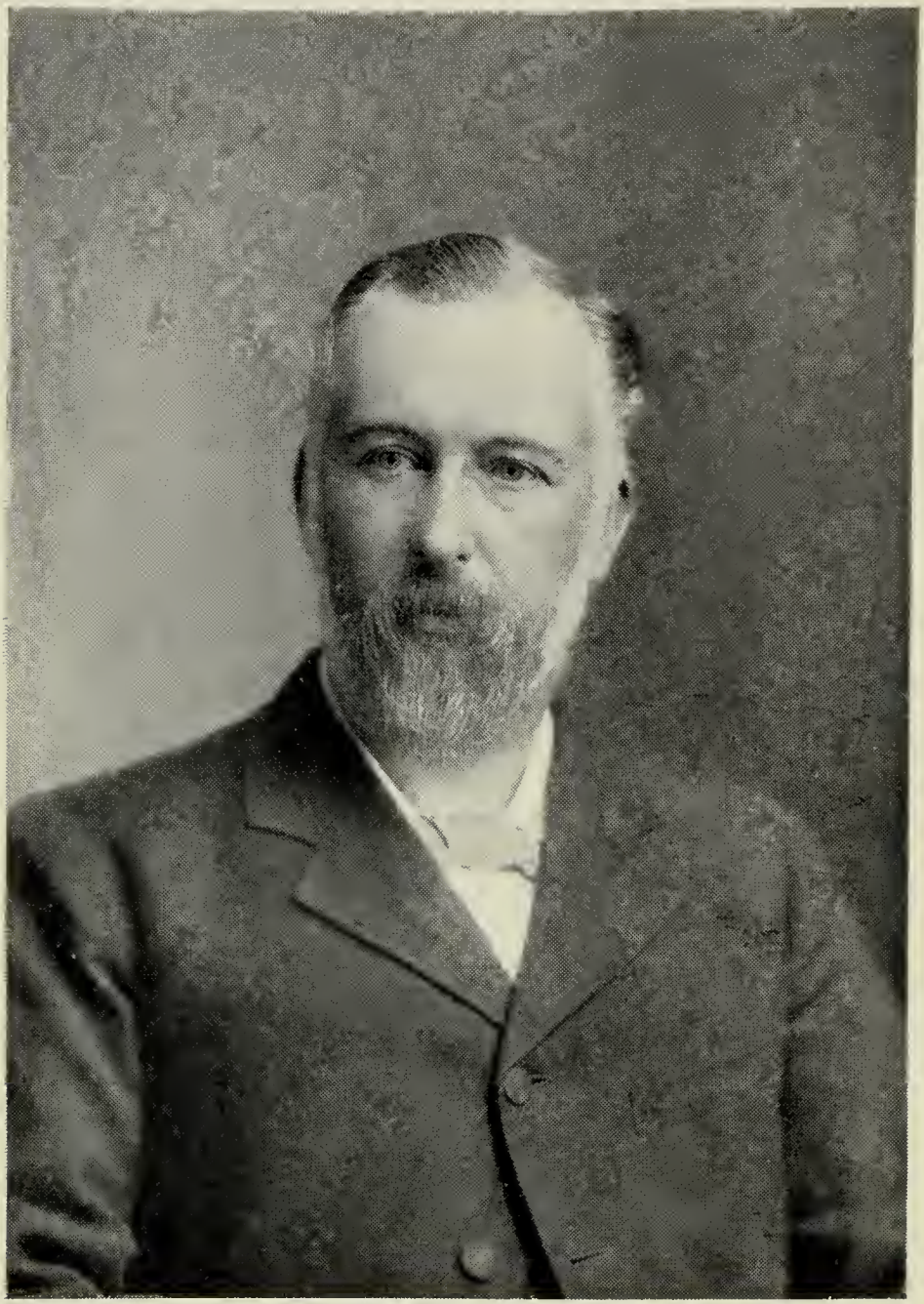
Among some 45 notes and artieles which he had published in the *Journ. of Botany* from 1880 to 1929 may be mentioned 'Life History of *Lithospermum purpureo-coeruleum*' (1884) and '*Prunella laciniata* L. in Britain' (1906). In the latter paper he was the first in England to find, describe and illustrate that plant, though 20 years earlier he "noticed a cream-flowered *Prunella* in more than one spot on the Mendip Hills, but carelessly let it pass for a eolour-sport of *P. vulgaris*." This tends to illustrate the broad view he took of speeies and in a measure his cautious nature, for though he wrote so much, he never did so precipitately. Partly for similar reasons *Rubus Bucknalli* and the well-marked variety *atlanticus* of *Juncus maritimus* were almost the only new plants he named. He did especially good work on Batrachian *Ranunculi*, *Sorbus*, *Rubus*, *Mentha*, etc., but his knowledge of numerous genera was very great.

For many years White was an active and valued member of the two British Exchange Clubs and a contributor to the Herb. Normale managed by Dörfler at Vienna. He did not join the Watson Club until 1900, when he contributed 725 Rubi and other critical plants. Except for four years he sent yearly parcels up to 1932, and his total was 4941 sheets. He also wrote many useful notes on plants sent to the Club.

For a brief time he gave a few lectures as Speeial Lecturer in Systematic Botany at the University of Bristol, which post was nominally renewed each year until his death. In 1927 he was awarded the Hon. M.Sc. degree. Most of his books and his very fine British and Continental herbaria are bequeathed to the University. This addition makes Bristol in the matter of Herbaria at English Universities probably next in importance to Oxford, Cambridge and Manehester.

White's vivid sense of humour aceompanied a dignified and gracious mien. He was ever ready to help and eneourage. A prompt and admirable correspondent, his ealigraphy was

BRIT.MUS. (N.H.)
BOTANY



Yours sincerely
Spencer H. Rickman

clear and beautiful, and he was quite a good draughtsman. He was buried at Canford Cemetery after a short service at Clifton Parish Church.

We are obliged to the 'Journal of Botany' for the use of a block made from a photograph taken in 1927, and kindly supplied by Mr. Dan Hanbury White who contributed towards the cost.

H. S. THOMPSON.

Spencer Henry Bickham (1841–1933).

Spencer H. Bickham, J.P., F.L.S., who died (aged 92) April 7, 1933, at Underdown, Ledbury, will be much missed by the Club and elsewhere. He joined in 1901, and was our efficient Treasurer from 1907 until 1920, and he kindly acted as Distributor in the year 1906–7. A parcel of his good and useful specimens was contributed every year, except in 1920, until 1924. His total was 5150 sheets, an average of 224 in twenty-three years. And all this was done between the age of 60 and 83, notwithstanding his prodigious activities in other spheres.

After a service in Ledbury Church, April 11, the funeral was at Bowden Parish Church.

Prior to taking up his residence at Underdown, Ledbury, in 1891, he was a member of a Manchester business firm, and lived at Alderly Edge. He was thrice married, his three wives having predeceased him. His six daughters and one of two sons (all by his first wife) survive him.

From the account in *The Ledbury Reporter and Guardian*, April 15, from which we quote, it is obvious that Mr. Bickham was not only the most prominent, hard-working and highly esteemed resident "within living memory," but "retaining his faculties in exceptional degree, he led a life of astonishing activity for one of his age. Keen, alert, regular and punctual in all his manifold activities, he lived for his work, which he was able to continue until a few months ago."

In the Rector's tribute at the Parish Church on the following Sunday, we read that "for fourteen years S. H. Bickham held the Bishop's license as a lay reader, and delighted to read the lessons at Matins until he had turned the wonderful age of four-score years and ten . . . . He served on countless committees, of which almost without exception he was chosen as Chairman." He took a great interest in Education, and

as a Magistrate for 40 years (being latterly Chairman of the Ledbury Bench) " his decisions were always just and tempered with mercy."

Born near Manchester, he studied at Owens College and under Leo. H. Grindon (1818–1904) the botanist and writer on natural history. Bickham was an early member of the Manchester Literary and Philosophical Society, and remained a member throughout his life. As a young man he travelled extensively abroad on botanizing expeditions. He was a man of unusual versatility, being also deeply interested in archaeology and astronomy.

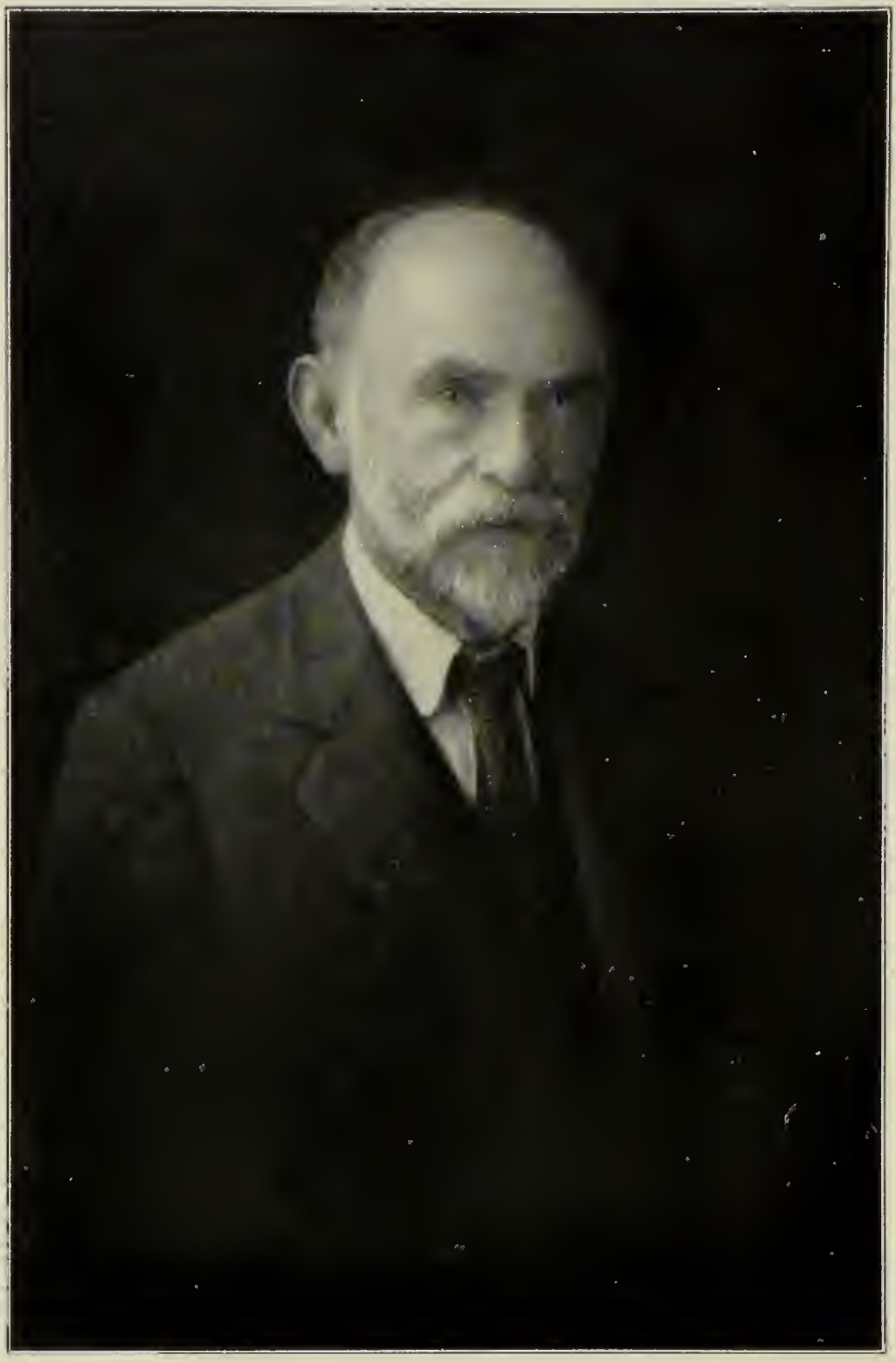
In his beautiful and interesting gardens at Underdown he grew more than a thousand kinds of plants from various parts of the world ; and he found great pleasure in taking visitors to see these, his rock garden being a particularly good one.

It is probable that Bickham sent a few interesting notes to the best of the horticultural press ; but he refrained from often rushing into print. Apparently a short note on " *Silene noctiflora* in Worcestershire " was his first in the *Journal of Botany* (1903). This was followed, up to 1917, by some half dozen more notes, the only paper of more than a page being in 1913 on Carnarvonshire Plants. It was in collaboration with E. S. Marshall and W. A. Shoolbred, after their three weeks visit to Capel Curig in July, 1912. E. F. Linton was a member of the party fourteen days. In 1916 came Bickham's " William Peete and his Herbarium," a page of very interesting matter about that old herbarium which Bickham had bought. Peete (1771–1848) is referred to by Mr. Pugsley in his present note on *Silene nutans*. In 1917 appeared an interesting and important note on " *Carex pseudo-paradoxa* S. Gibson."

This notice of so truly kind and good and remarkable a man may be closed by a quotation from the late F. H. Davey when Distributor for this Club in 1906–7 : " Mr. Bickham's generous parcel deserves special mention. Not only is he an easy first in point of number, but the care which he has bestowed upon his specimens, as well as the faultless manner in which they were packed, can be recommended to the few who have yet to learn . . ."

We are indebted to a member of the family for the loan of an excellent photograph of Mr. Bickham taken a considerable time ago, and to his daughter, Mrs. Bather, for a few particulars of his early life.

H. S. THOMPSON.



JAMES GROVES.

James Groves (1858–1933).

By the death of James Groves on the 20th March last we lose one of the most distinguished of our systematic botanists, and the Club its honorary member who was ever ready to determine its Charophytes and other aquatic plants.

Groves was born in London in 1858, three years after his brother Henry. Both the boys left school at an early age owing to the untimely death of their father, and in 1872 James entered the office of the Army and Navy Stores. They had both been imbued with a love of natural history while at school in Godalming, and from the commencement of their business careers devoted their leisure to the acquisition of a sound knowledge of British flowering plants. In 1874 they joined the South London Microscopical and Natural History Club, and made the acquaintance of Hewett Cottrell Watson, B. Daydon Jackson, and other botanists of repute. In the following years they botanised extensively in Hampshire with Frederick Townsend, and in 1881 described as a new species the remarkable grass *Spartina Townsendii*. Other additions which our Flora owes to them are the very distinct hybrid Batrachian *Ranunculus Hiltonii* (1901) and *Luzula pallescens* (1909).

In 1904 the brothers edited a new edition (ninth) of Babington's "Manual." This was brought up to date and enlarged with fresh accounts of several critical genera, but limitations imposed by Mrs. Babington prevented other alterations which might have been desirable. The nomenclature was thoroughly overhauled, however, in accordance with the accepted principles of that period, and the general soundness of the Groves' views on this subject may be seen from their paper on the use of Linnean specific names (Journ. Linn. Soc. (Bot.) XXXV, 1902).

Meanwhile the brothers were working intensively on the Charophytes, the study of which group they had begun in 1877. Their first important paper, "A Review of the British Charaeeæ," appeared in the "Journal of Botany" in 1880, and this was succeeded in subsequent years by a series of critical articles, often well illustrated, in which a number of new forms were described. Two fascicles of the British species were issued in 1892 and 1900, Canon Bullock-Webster participating in the latter.

In 1912 Henry Groves, who had hitherto been the collaborateur of all his brother's botanical work, died, and six years later James retired from the Army and Navy Stores, where he had become an Assistant Secretary, and left London for the Isle of Wight, residing first at Yarmouth and subsequently at Freshwater. Groves' interest was henceforth centred on the Charophytes. In his brother's lifetime he had already worked on the *Characeæ* of the West Indies, the group in Urban's "Symbolæ Antillanæ" being described by the Messrs. Groves; and he now studied not only foreign species of the family but wrote an account of the fossil *Characeæ* of the Purbeck Beds with Clement Reid (1916).

"The British Charophyta," written in conjunction with Canon Bullock-Webster and printed for the Ray Society, is perhaps Groves' most important work. The first volume, dealing with the *Nitelleæ*, appeared in 1920: the second, containing the *Chareæ* and an account of the geological history of the whole group by Groves, in 1924. The two volumes, which treat of thirty-two species and are finely illustrated with excellent plates throughout, form one of the most complete existing monographs of any group of British plants. Indeed, no similar work on any of our genera of flowering plants seems comparable with them. Two further fascicles of "British and Irish Charophyta" were issued with Canon Bullock-Webster in 1924.

After the publication of the Monograph, Groves produced a second paper with Clement Reid on the fossil forms—"The Charophyta of the Lower Headon Beds of Hordle Cliffs"; but the energy of his later years was mainly devoted to the *Characeæ* of India, Madagascar and South Africa, on which he wrote papers in the Journal of the Linnean Society and elsewhere. At the time of his death he was engaged on the completion of a world-wide Conspectus of the entire family.

James Groves was a born naturalist, who by dint of hard work became at an early age a leading exponent of British flowering plants, and subsequently an authority of world-wide repute on that obscure and difficult group, the *Charophyta*. His papers are characterised by a uniform precision, combined with sound sense, that is often lacking in contemporary work, and the intelligence and care displayed in the selection and preparation of his specimens make them models of their kind. In this respect the fascicles of *Characeæ* are perhaps unique.

He had been a Fellow of the Linnean Society since 1885, serving on the Council during the Great War, and after his removal to the Isle of Wight he co-operated in founding the I. W. Natural History and Archæological Society.

H. W. PUGSLEY.

LAST REPORT: CORRECTIONS AND NOTE.

P. 120, line 4.—For *polymorpha* read *polycarpa*.

P. 123.—For Burningford read Burningfold.
For Dursford read Dursfold.

P. 129, last par.—For Barmingham read Barningham.

P. 144, last line.—For 1913 read 1931.

P. 135.—*E. nemorosa* Löhr. Shalford Common, [C 4] J. E. Lousley. Mr. Pugsley writes: "The specimens certainly belong to my var. *transiens*, which is frequent in S.W. Surrey and is characterised by the peculiar habit that attracted Mr. Lousley's attention."

Thalictrum minus L. s.str. (*T. arenarium* Butcher, *T. marinum Druce*, *T. dunense* auct. angl.). Coast sand-hills, Redcar, N.E. Yorks, July 2, 1932. Specimens in flower to supplement those in fruit sent last year.—J. W. Carr. Correct. —A. J. Wilmott.

Ranunculus trichophyllus Chaix. Ditch near Portishead, N. Somerset, June 17, 1932.—J. W. White. Good *trichophyllus*. Some of the submerged leaves show the characteristic rigid and divaricate segments of this species well, while others on the same plant are so mud-encrusted that their real nature is masked. As usual, the plants are excellently displayed and are some of our late member's last gatherings. I always regarded Mr. White's sheets of these aquatics as among the best of their kind.—W. H. Pearsall.

Ranunculus trichophyllus Chaix var. *radians* (Revel). Old quarry pool at Wickwar, West Gloucester, June 7, 1932.—J. W. White. Excellent examples from this well-known station. The floating-leaves are extremely distinctive.—W. H. Pearsall.

Ranunculus peltatus Schrank, var. *floribundus* (Bab.). Pond at Eastfield, Westbury-on-Trym, W. Glos., May 29, 1932.—J. W. White. Uncharacteristic for this variety of *peltatus* and nearer the f. *truncatus* I should say.—W. H. Pearsall.

Ranunculus Baudotii Godr. Littleton-on-Severn, West Gloucester, June 18, 1932.—J. W. White. Typical and robust *Baudotii* : some of the floating-leaves are 4·2 cm. across. The glabrous fruits are scarcely mature, and therefore appear somewhat less prominent than usual.—W. H. Pearsall.

Corydalis claviculata DC. Oxton Bogs, Nottinghamshire, August 13, 1932. Sent because not given for 56, Notts. in Druce's "Comital Flora." It *is* however recorded for Notts. in the second Supplement to "Topographical Botany," on the strength of specimens sent to Arthur Bennett many years ago. I have collected it in three widely separated stations in the county.—J. W. Carr.

Fumaria officinalis L. var. *Wirtgenii* Haussk. [968]. White Hill, Hitchin, Herts., July 6, 1932.—J. E. Little. This is very well marked material of the variety.—H. W. Pugsley.

Nasturtium officinale R. Br. var. *microphyllum* (Boenn.) ? Dried up peat ditch, near Shapwick Station, N. Somerset, June 25, 1932. Attenuate, small-leaved form up to 3 ft. high. Pods, beak and pedicels longer than usual.—H. S. Thompson. Yes, a rather large form of var. *microphyllum* (Boenn.).—E. Drabble. I think this is only a weak example of the typical species. The plant usually referred to var. *microphyllum* Boenn. has much smaller leaflets, with four pairs to the upper leaves.—H. W. Pugsley.

Barbarea vulgaris R. Br. var. *transiens* Druce. Tyndall's Park, Bristol, W. Glos., June, 1923.—J. W. White. Yes : I agree . . .—J. Fraser.

Cochlearia anglica L. Tidal banks of R. Avon, Bristol City, W. Glos., May 17, June 11, 1932. With seedling leaves.—H. S. Thompson. The radical leaves of a seedling are welcome. —J. Fraser. This must be placed under *C. anglica sensu stricto*, though the fruits are narrower than in the plant of the Thames marshes, and the lower leaves are more rounded at the base than usual.—E. Drabble. Both the pods and the

leaves of the Bristol plant are very variable, as was shewn in this large series which a member suggested my gathering.—H. S. T.

Erysimum cheiranthoides L. Portishead, N. Somerset, July 25, 1932. In potato patch, with *Galium Vaillantii*, etc. —H. S. Thompson.

Brassica adpressa Boiss. Waste ground near Railway Station, Newhaven, Sussex.—Coll. A. O. Hume, July 9 and August 26, 1907. Comm. S. Lond. Bot. Inst. Yes, *B. adpressa* Boiss. (*incana* (L.) F. Schultz.).—E. Drabble.

Diplotaxis muralis DC. b. *Babingtonii* (Syme). [922]. Hitchin, Herts., October 29, 1932.—J. E. Little. This is *D. muralis* DC. var. *intermedia* (Schur. pro sp.) which comprises the taller, stouter and more leafy of the plants usually called var. *Babingtonii*. I have had similar plants from Oxfordshire and Derbyshire.—E. Drabble.

Diplotaxis muralis was noted as rare in Webb and Coleman's Flora Hertfordiensis (1859), but during the last century it has much extended its range in North Herts., travelling along the railways, and is now frequently to be found on ballast, in waste places and on arable fields.

The over-winter plant, which received the name var. *Babingtonii* (Syme), is now not infrequent. Ascherson and Graebner remark that this form changes habit considerably, loses the basal rosette, and becomes much-branched and luxuriant. It thus simulates the habit of *D. tenuifolia*, and the length of the pedicel of a ripe siliqua is sometimes as much as 18 mm. to a pod of 32 mm., or 16 : 28, not at all corresponding to book descriptions.

The flowers of *D. tenuifolia* become much smaller at the end of the season, not greatly different in size from those of *D. muralis*.

A useful contrasting character is given by Asch. and Graebn. viz., *D. tenuifolia :* siliqua shortly stiped above the scar of the calyx. *D. muralis :* siliqua without stipe.—J. E. L.

D. tenuifolia DC. Aldeburgh, September, 1928.—Leg. K. D. Little. Pod with stipe and style up to 34 mm. (or 32 mm. or 20 mm.). Pedicel up to 22 mm. Stipe 1·0 mm. Flowers relatively small, 6·0 mm. long. (Hooker gives, pods $\frac{1}{3}$–$\frac{1}{2}$ in.) —J. E. Little.

Bunias orientalis L. (fruits). L. & N. E. R. Goods Yard, Hitchin, Herts., August 30, 1929.—J. E. Little. Rightly named. Native of E. Europe, it turns up in various parts of Surrey.—J. Fraser.

Viola anglica Drabble. [975]. Ramsfold Farm, Lurgashall, W. Sussex, August, 1932.—R. J. Burdon and J. E. Little. Taking the whole gathering into consideration there is no doubt that this is *V. anglica*. Some of the specimens do not show the branching from the base, and in many the leaves are narrow and more acute than usual.—E. Drabble.

Viola monticola Jord. [951]. Near Nine Springs, St. Ippolyts, Herts., October, 1931.—J. E. Little. Yes, the three sheets distributed are *V. monticola*, but not very characteristic. I have seen much more typical *monticola* from Wilbury Hill and West Hill, Hitchin, Stevenage, Royston and Cole Green—all in Hertfordshire.—E. Drabble.

Viola agrestis Jord. ? Shipham, N. Somerset, September 17, 1932. In rough, bushy, uncultivated ground. Corolla small, 9×7 mm., cream-coloured, with deep yellow eye and broad, roundish lobes.—H. S. Thompson. Whole plants have not been seen, but the long internodes and pale green colour seem to indicate *V. segetalis* Jord.—E. Drabble.

Dianthus Armeria L. (seeds). Origin, Cookham, Berks. *Hort.* Maidenhead, August 3, 1932.—Leg. M. Gardner, Comm. J. E. Little.

Dianthus prolifer L. Waste ground, N. & W. of railway station, Newhaven, Sussex, July 9, 1901.—A. O. Hume., Comm. S. Lond. Bot. Inst.

Saponaria officinalis L. Sandhills, Holme-next-the-Sea, Norfolk, August 21, 1932. A large clump in magnificent flower.—J. W. Carr.

Silene nutans L. var. *Smithiana* Moss. Origin from seeds of plant on Nottingham Castle rock, its first-known British locality. Grown in my garden at Nottingham for many years past, and collected in June, 1932. Sent for comparison with the Derbyshire *S. nutans* sent last year.—J. W. Carr. When cultivated this plant evidently increases in luxuriance and becomes indistinguishable from the reputedly taller form of Dover Cliffs, about which so much confusion has arisen

(*vide* Report for 1930–31, p. 61, and for 1931–32, p. 113). The account of *S. nutans* L. in E. B. 465 (1798) was taken from the plant growing at Nottingham, the "Nottingham Catchfly," and this led to this form being erroneously regarded by British botanists as the typical species. Smith (*Fl. Brit.* ii. 467 (1800)) introduced in addition *S. paradoxa* L. into the British Flora, as the "Dover Catchfly," on the strength of a record by Ray, and apparently without any first-hand knowledge of the plant; and no evidence can be traced of the species having ever existed at Dover. The only specimen from Dover in Smith's herbarium is unnamed, but it is annotated in Smith's hand "True Dover Campion, 1822." The specimen is *S. nutans* var. *Smithiana* Moss. In 1825 Peete found a different plant at Dover, which he described and figured as *S. patens* in E. B. S. 2748 (1832). This plant was subsequently identified with *S. italica* Pers., and the original figure was used by Syme to illustrate that species in E. B., ed. 3, 208. No specimen of *S. italica*, which was confused with typical *S. nutans* (*S. dubia* C. E. Salmon) in the "Flora of Kent," has been seen from Dover, other than Peete's, although the species still grows in North Kent. I think that one form only grows on the Dover Cliffs, that no real difference exists between the Dover and the Nottingham Catchfly, and that Moss was right in merging them both in one variety *Smithiana* of *S. nutans* L.—H. W. Pugsley.

In stature, size, shape and hairiness of the leaves, this is so close to the Stony Middleton (Derbyshire) plant of last year's distribution that I would say they are the same thing, and the varietal name by Moss could be given to both. The hairs of the species are jointed, and the special feature of the Stony Middleton and the Nottingham Castle rock plants is that the basal joint of the hairs is bulbous and so large and conspicuous as to give the leaves a very scabrous appearance. The leaves drop more or less of the upper part of the hairs, leaving only the bulbous base; but the amount of this calvation varies from leaf to leaf, even in the same pair, and I would expect that this would vary more or less in different seasons, according to rainfall.—J. Fraser.

Moenchia erecta Gaert. Sandy meadows around Camber Castle, Rye, Kent.—Coll. A. O. Hume, May 16, 1908, Comm. S. Lond. Bot. Inst.

Stellaria neglecta Weihe. Hedgebank near Publow, N. Somerset, June 1, 1929; and hedgebank, Stanton Drew, N. Somerset, May and June, 1932.—J. W. White.

Sagina filicaulis Jord. [693]. Near Oakfield, St. Ippolyts, Herts., October 5, 1925.—J. E. Little. (See *W.B.E.C.R.*, 1926, 375, and *B.E.C.R.*, 1927, 567). Correct. One plant has some non-glandular hairs on parts of the stems and leaves, and might be considered a variety, if constant.—J. Fraser. This differs from typical *filicaulis* only in the eglandular and glabrous pedicels and calyces, and must, I think, be called an eglandular form.—E. Drabble.

Spergularia marginata Kittel. (1) Salt marsh, Heacham, near Hunstanton, Norfolk, Aug. 7, 1932. (2) Salt marsh, Freiston Shore, near Boston, Lincolnshire, Aug. 14, 1932.—J. W. Carr. Yes.—E. Drabble. No. 2: Correct. Plant glabrous, except inflorescence. Seeds winged and marginal. —J. Fraser. No. 1, Heacham: Pedicels and calices practically eglandular. This condition must be uncommon, as out of 19 gatherings of *marginata* from various parts of the country in my Herbarium only one even approaches Prof. Carr's form. As shown by Mr. Pugsley (*Journ. Bot.* lix, p. 130 (1921)) the common salt-marsh state of this species is more or less glandular, but the mere possession of glands does not constitute var. *glandulosa* Druce.—J. E. Lousley.

Genista pilosa L. Chapel Porth, St. Agnes, Cornwall. Coll. F. H. Davey, June 6, 1906. Comm. S. Lond. Bot. Inst.

Medicago falcata L. Par Harbour, E. Cornwall. Coll. F. H. Davey, July 15, 1901. Comm. S. Lond. Bot. Inst. Presumably F. H. Davey must have seen fruits before he named this *falcata*. My specimen from the S. London Bot. Inst. is without fruits, and the large strongly dentate leaflets and large flowers suggest *silvestris* Fries, which now occurs rather frequently on waste ground.—E. Drabble.

Trifolium [*glomeratum* L.]. Camber Castle, near Rye, Old Harbour, Sussex. Coll. A. O. Hume, June 7, 1906. Comm. S. Lond. Bot. Inst. Not *glomeratum*, which is a glabrous plant, with the teeth of the calyx reflexed even while in flower. All the plants I received are *T. striatum* L. except one, which is *T. scabrum* L.—J. Fraser.

Lotus tenuis Waldst. and Kit. Near Milton Clevedon, N. Somerset, Aug. 31, 1915.—W. A. Shoolbred. Comm. Nat. Mus. of Wales. Yes.—E. Drabble. The parish is near Bruton, though in Watson's so-called N. Som.—Ed.

Vicia Orobus DC. Cardigan, v.c. 46 ; rough pasture, right bank of R. Teify below Garth Mill, Pont Llanio, July 8, 1932. H. S. Thompson. Useful fruiting material.—E. Drabble.

Spiraea Ulmaria Linn. var. *denudata* Boenn. Abundant with the white-felted leaved plant in a ditch near Lodge Farm, Holmwood, Surrey, Aug. 27, 1932.—E. C. Wallace. Extreme examples of the " variety," which is possibly only a " state " dependent on ecological factors. See Yapp (*Annals of Botany*, V. p. 815 (1912)).—J. E. Lousley. Very good material of var. *denudata* (Presl.) pro sp. In Fl. Cechica Presl. writes : " fol. . . . glabris subtus ad venas pubescentibus . . . ," which exactly fits Mr. Wallace's plant. The editors of Bab. *Man.*, ed. 9, give " glabrous on under surface," making no mention of the hairs on the veins, and quote Boenninghausen as the authority. This matter is being dealt with elsewhere. I have seen no plants with entirely glabrous under surface of the leaf.—E. Drabble.

Rubus ———. Hardwick, Castle Eden, Durham, Aug. 3, 1932.—R. J. Burdon. *R. Lindebergii* P.J.M., much mildewed.—H. J. Riddelsdell.

Rubus ———. Castle Eden, Durham, July 30, 1932.—Burdon. *R. caesius* ×. The *caesius* influence is very obvious ; the other is not plain. Badly mildewed in parts.—H. J. Riddelsdell.

Potentilla norvegica L. [Ref. D.10]. In a very wild spot, remote from buildings or cultivation, Pirbright Common, Surrey, where it was probably introduced by army wagons during manœuvres. Varying greatly in size without any apparent ecological explanation. The small specimens under 10 cm. in height (not represented on every sheet) probably fall under var. *genuina* Th. Wolf. forma *parvula* Domin. July 3, 1932.—J. E. Lousley. Yes, *P. norvegica* L.—E. Drabble.

Pyrus minima Ley. (now *Sorbus minima* Hedl.). Craig Cille, Breconshire. Various collectors. Ex. Herb. Nat. Mus. of Wales.

Pyrus communis L. Thornbury Knap, near Hill, W. Glos. Fl. Ap. 10, 1896; Fr. July 20, 1932.—J. W. White. *P. communis* L. var. *Déséglisei* (R. and C.) excluding the flowering branch on my sheet which is not *Déséglisei* and appears to be *Pyraster*.—E. Drabble.

Saxifraga hypnoides L. Rocks about Devil's Kitchen, Lake Idwal, Carnarvonshire, June 26, 1905. Coll. A. O. Hume. Comm. S. Lond. Bot. Inst. I should name these plants *S. sponhemica* Gmel. rather than *S. hypnoides*. There is a multiplicity of forms of this group in Cwm Idwal, presumably of hybrid origin. *S. decipiens* Ehrh. formerly grew about the Devil's Kitchen in addition to the other two species, and in 1902 I collected what I believe to be *S. decipiens* × *sponhemica*, when the rarer *S. decipiens* was apparently no longer to be found.—H. W. Pugsley.

Chrysosplenium alternifolium L. Rivar Wood, Berks. C. P. Hurst, April 25, 1911. Comm. S. Lond. Bot. Inst. Plants of the same gathering were distributed in 1911–12 and the note thereon (Rep. B. E. C. 1911, p. 93) is the first record of the species for Berkshire. Riever Wood (written Rivar on the label) is in the S.W. corner of Berks. near the Wilts. boundary. In the late Dr. Druce's "Supplement of the Flora of Berks." (Rep. B. E. C. 1917, p. 256) there is no mention of this locality for the species, though C. P. Hurst is there said to have found it in Berks. in 1910.—J. E. Lousley.

Epilobium hirsutum × *montanum*. Damp meadow, Littleton, Surrey, Aug. 11, 1932.—G. M. Ash. I think there can be no doubt that this is correctly named. It is, in my experience, a very uncommon hybrid.—E. Drabble.

Epilobium montanum L. (Collected because doubtful of the species). Portishead, N. Somerset, July 25, 1932.—H. S. Thompson. My specimen seems to be a hybrid, and as the stigma is only partially 4-fid, I think it must be *montanum* × *roseum*; the small pale pink flowers are also suggestive of this parentage.—E. Drabble.

Epilobium obscurum Schreb. Roadside, Witley Park, Surrey, Sept. 24, 1932.—G. M. Ash. Yes, *E. obscurum* Schreb. with the characteristic autumnal stolons.—E. Drabble.

Epilobium obscurum Schreb. f. *strictifolia* Hausskn. ? [972]. Ramsfold Farm, Lurgashall, W. Sussex, Aug., 1932.—R. J. Burdon and J. E. Little; comm. R. J. B. I think this rightly

named.—E. Drabble. Rather a distinct form on account of the strictly erect, densely pubescent branches, scarcely glabrescent even at the base, and the erect leaves. There is a form named *E. virgatum* Fries, which is stiff, erect, with short stolons, promptly rooting. Stolons would be desirable.—J. Fraser. This shows no trace of stolons and is not a form of *E. obscurum*. It may be *E. Lamyi* F. Schultz, but the specimens are not in good condition.—H. W. Pugsley.

Epilobium hybrid (stigma nearly clavate). Field edge, Birtley, Witley, Surrey, June 23, 1932.—G. M. Ash. *E. Lamyi*, or a hybrid with *E. obscurum*.—H. W. Pugsley. It is very unwise to name hybrid *Epilobia* by mere inspection without knowing with what species the plants were growing, but my sheet of this appears to be *obscurum* × *montanum*. *E. montanum* × *obscurum*. Roadside, Witley Park, Surrey, Sept. 24, 1932, may also be of the same parentage as the last, as Mr. Ash thinks, but the large flowers suggest to me rather *obscurum* × *parviflorum*, though the stem is not very hairy below.—E. Drabble.

Epilobium Lamyi F. Schultz. Waste ground, Littleton, Surrey, Sept. 15, 1932.—G. M. Ash. Yes, *E. Lamyi* Schultz. —E. Drabble. Probably so, unless a hybrid of *E. adnatum* Griseb. with similar features.—H. W. Pugsley.

Epilobium palustre L. possibly crossed with *obscurum*. On recently top-cleared peat, Ashcott Moor, N. Somerset, Aug. 10, 1932.—H. S. Thompson. Not pure *palustre*. If it grew with *obscurum* it may very well be the hybrid suggested by Mr. Thompson.—E. Drabble. Not *E. palustre*, which has . . . and the stolons have a globular ball of leaves about the size of peas, when they can be found. The leaves of these specimens are much broader and serrate, with four raised lines on the stem. The leaves are too much perished to enter upon a hybrid, but I would suggest *E. tetragonum* Curt.—J. Fraser. Not *E. palustre* . . . . Probably *E. obscurum*, but the specimens are too fragmentary for certainty.—H. W. Pugsley. Probably a mixture was gathered from among several spp. growing together, and including good *palustre* which I know well.—H. S. T.

Astrantia major L. Stokesay, Shropshire. Various collectors. Ex. Herb. Nat. Mus. of Wales.

Carum verticillatum Koch. Cardigan, v.c. 34. In marsh, right bank of R. Teify, between Pont Llanio and Tregaron, July 11, 1932. Also seen from the railway in greater quantity in meadows N. of Lampeter.—H. S. Thompson.

Cornus Mas L. (Cornelian Cherry). Alien in a wood, Patchway, W. Gloster, Feb. 29, July 19, 1932. Four tall bushes, one more than 20 ft. high, are thoroughly naturalised in a covert, which was planted about 60 years ago and no planting has taken place since.—Ida M. Roper. Correct.—E. Drabble. Yes.—J. Fraser.

Sambucus nigra L. var. *laciniata* Mill. Lane-side, near Storrington, W. Sussex, June 11, 1932.—E. C. Wallace. Often cultivated, and probably often bird sown in this country and on the Continent.—J. Fraser.

Galium Vaillantii DC. Potato patch, near Portishead Station, N. Somerset, July 25, 1932. A new locality. Rather slender growth on sandy soil. For comparison are some robust specimens from a potato-field on the Shapwick peat-moor, though by no means the largest which were so abundant last summer.—H. S. Thompson. Both correct.—E. G. Baker.

Dipsacus pilosus L. Via Gellia, near Cromford, Derbyshire, July 30, 1932.—J. W. Carr.

Gnaphalium supinum L. On earthy, stony slope by the Lawers Burn at less than 1,500 ft. alt. Mid-Perth, June 30, 1932. Tall, graceful plants recalling slender examples of *G. sylvaticum*.—E. C. Wallace. As the heads are distinctly stalked and the whole inflorescence-system lax, I suppose these may be called var. *fuscum* (Hartm.), but doubt if *fuscum* is worthy of varietal rank.—E. Drabble.

Galinsoga parviflora Cav. Near Galley Hill, Sutton, Beds., Sept. 26, 1932.—M. Brown and J. E. Little. In 1931 it was recorded at Welwyn Garden City by H. Phillips. Vidi !—J. E. L.

Anthemis tinctoria L. var. *discoidea* (Willd.). Godalming goods yard, Surrey; with *Melilotus officinalis* Lam. and *Salvia verticillata* L., July 16, 1932.—E. C. Wallace. Yes.—A. J. Wilmott and E. Drabble.

Senecio saracenicus L. *pro parte*. Banks of R. Chew, above Compton Dando, N. Somerset, Aug. 23, Sept. 15, 1932. The

leaves of the September specimens, from below Compton Dando, are affected with a rust which "seems to be *Coleosporium Senecionis* Fr." (Dr. Ivimey-Cook).—H. S. Thompson.

Cirsium eriophorum Scop. sub-sp. *britannicum* Petrak. Rough pastures on Lower Lias, N. of Compton Dando, N. Somerset, Sept. 15, 1932. See Report, 1922–23, with photograph. (Before Dr. Petrak's monograph on *Cirsium* was published he altered the name "*anglicum*" to *britannicum*). —H. S. Thompson.

Cirsium heterophyllum Hill. Near Killin, Perthshire, July 15, 1930.—K. D. Little. Comm. J. E. Little.

Hieracium ———. Witley, Surrey, June 23, 1932.—R. J. Burdon. A form of *H. serratifrons* Almq. near var. *lepistoides* (Johans.). The whole rootstocks of several of these specimens have been pulled up. In these days, when phyllopodous hawkweeds are sadly diminishing in numbers, it would be better to cut off the shoot with the radical rosette, to avoid destroying the plant.—H. W. Pugsley.

Hieracium ———. Shady bank under beech trees, Oxton Hill, Nottinghamshire, July 1 and 29, 1932.—J. W. Carr. I think *H. chlorophyllum* Jord., formerly included in *H. sciaphilum* Uechtr.—H. W. Pugsley.

Lactuca Scariola L. Waste ground, Avonmouth Docks, W. Glos., Sept. 19, 1929.—J. W. White.

Lactuca Scariola L. var. *dubia* (Jord.). [985]. Brick-pit, Wootton Pillinge, Beds., Sept. 28, 1932.—J. E. Little. This plant with entire leaves agrees with Jordan's var. *dubia*: "Feuilles oblongues—obovales ou spatulées indivisés, à bord denticulées tout-autour," which appears also closely akin to var. *integrata* G. and G.: "Feuilles entières, denticulécs, largement lanceolées, allongées." (Rouy Fl. Fr.).—J. E. L.

The grey achene is relatively narrower than in *L. virosa*, and more bristly with short cilia at the top. Achenes to show this are enclosed, but it was difficult to collect them in quantity as the habit of the plant is to ripen only a few heads at a time. —J. E. Little. Yes, var. *dubia* (Jord.). It agrees with the French material at Brit. Mus. so named.—A. J. Wilmott and E. Drabble. I think var. *dubia* (Jord.), with nearly entire leaves.—H. W. Pugsley. Messrs. J. Fraser and J. E. Lousley

also agree. The latter adds : I have seen this variety near Higham, Kent, in a station where it is almost certainly native. There is a very similar var. *integrata* Gren. and Godr. (Fl. France, p. 320) which appears to differ by having longer leaves which are without spines on the mid-rib beneath, which might well occur in Britain also.—J. E. Lousley.

Erica Tetralix L. Form with all the flowers replaced by sepaloid braets. Near Moreton, Dorset, Sept. 9, 1932.—L. B. Hall. A few specimens of this plant were sent to the Club last year, but members would probably like to have more material. All specimens sent, last year and this, are from the same bush. Again this year all the heads were of the same peculiar form. The plant grows among the normal plants on an extensive heath. I have not been able to find more than this one plant with the modified heads. I have taken a piece of the root to my garden to test its response to varying conditions.—L. B. Hall. (See last Report).

Pyrola rotundifolia L., var. *maritima* (Kenyon). Formby sand-hills, near Liverpool, Lancashire. Coll. A. O. Hume, Sept. 14, 1905. Comm. S. Lond. Bot. Inst. Yes.—E. Drabble. Correct. It has at least three varietal names.—J. Fraser.

Limonium vulgare Mill. (1) Salt marsh, Heacham, near Hunstanton, Norfolk, Aug. 7, 1932. (2) Salt marsh, Freiston Shore, near Boston, Lincolnshire, Aug. 14, 1932.—J. W. Carr.

Limonium binervosum C. E. Salm. Salt marsh, Holme-next-the-Sea, near Hunstanton, Norfolk, Aug. 21, 1932. A small form of this species.—J. W. Carr.

Limonium bellidifolium Dum. Salt marsh, Holme-next-the-Sea, near Hunstanton, Norfolk West, v.c. 28, Aug. 21, 1932. Abundant here. Druce, in his " Comital Flora " (1932) makes the extraordinary statement that this species is " extinct in 28."—J. W. Carr.

Gentiana lingulata C. A. Agardh. var. *praecox* Towns. Thin chalk-turf on Banstead Downs, Surrey, June 14, 1932.—E. C. Wallace. Yes ; the terminal flower in each of my specimens has five petals and sepals, the lateral ones four ; this is a very usual arrangement in var. *praecox*. In the Isle of Wight the lateral flowers also may be pentamerous.—E. Drabble.

Symphytum tuberosum L. Montpellier, Bristol, v.c. 34, June 6, 1889.—J. W. White. There was an immense quantity

of this on the railway embankment by Montpellier Station in 1888, when I first reported it, but I believe none has been seen for many years.—H. S. T.

Atropa Belladonna L. Black Cliff, Monmouthshire, June 11, 1915. Leg. W. A. Shoolbred. Comm. Nat. Mus. of Wales.

Datura Stramonium Linn. Waste building land in Cheam village, Surrey, Sept. 14, 1932. It has appeared here and there on disturbed ground by new roads in the Cheam and Ewell district this year.—E. C. Wallace.

Scrophularia vernalis L. Wollaton Park, Nottingham, June 27, 1932. One of the most difficult plants to press that I have ever attempted. The leaves are extremely thin and delicate, while the hard wiry stems prevent them from lying flat on the drying paper, so that it is almost impossible to spread them out.—J. W. Carr.

Veronica polita Fries. [2660]. Vegetable garden, near Chew Magna, N. Somerset, Sept. 24, Oct. 25, 1932. The few remaining flowers were very small and nearly white.—H. S. Thompson. Yes, *V. polita* Fries. On my sheet there was also one piece of large, but typical, *V. agrestis* L. Should such accidental admixture with *polita* be present on other sheets, the oblong obtuse (as opposed to ovate acute in *polita*) fruiting sepals will readily enable the separation to be made.—E. Drabble.

Veronica (*polita* Fries ?). [2661]. Vegetable garden, near Chew Magna, N. Somerset, Sept. 24, Oct. 25, 1932. A vegetative form, with elliptic leaves, often long-stalked, but no flowers or fruit on either date. And one sheet has upper leaves narrowly triangular in shape.—H. S. Thompson. These large sterile specimens are very remarkable, but I think there can be no doubt that they are *agrestis*, which occurred in the same garden. (See 2660 above). I have seen sterile vigorous plants somewhat resembling these from elsewhere, and am very reluctant to suggest hybridity. The narrow uppermost leaves of one specimen, which give it a slight resemblance to *arvensis*, are unlike anything I have previously seen in *agrestis*.—E. Drabble.

Veronica agrestis L. [var. *micrantha* Drabble]. 994. Allotments, White Hill, Hitchin, Herts., Nov. 16, 1932.—J. E. Little. I don't think these very stout plants can be

called var. *micrantha*. My original *micrantha* was a small delicate plant with very tiny corollas (about 3 mm. in diameter *when spread open*) which rarely or never opened naturally and fell readily. It was ephemeral in habit and the important point is that it retained these characters year after year in cultivation in garden soil. Mr. Little's plants are very stout, with large leaves and capsules, and persist with great vigour into the late Autumn, while the *closed* corollas are about 3 mm. *in length* and nearly 6 mm. in diameter when spread open. I fear I was responsible for Mr. Little's labelling. Further examination has led me to reject these from var. *micrantha*.—E. Drabble. Are not the small corollas due to the late date of collecting (16 Nov.) ? The specimen sent had been flowering for some months.—H.W. Pugsley. The small size of the corolla *in true* var. *micrantha* is certainly not a seasonal effect.—E. Drabble.

Veronica persica Poir. var. *Aschersoniana* Lehm. [2665]. Simulating var. *Kochiana* in its small leaves on the upper two-thirds of its long shoots. Arable field, near Newton St. Loe, N. Somerset, Aug. 6 and 11, 1932.—H. S. Thompson. Yes, my sheet is correctly named ; var. *Aschersoniana* often runs to this small-leaved state, especially on dry ground.—E. Drabble.

Veronica persica Poir. var. *Kochiana* Godr. [990]. Near Nine Springs, Great Wymondley, Herts., Oct, 1932.—J. E. Little. Correct for all the specimens on my sheet.—E. Drabble.

Veronica persica Poir. var. *Kochiana* G. and G. Ramsfold, Lurgashall, W. Sussex, Aug. 23, 1932.—R. J. Burdon and J. E. Little. Yes, correct for all the specimens on my sheet. —E. Drabble.

Veronica persica Poir. var. *Corrensiana* (Lehm.). [989]. Wymondley Road, Hitchin, Herts., Sept., Oct., 1932.—J. E. Little. Yes, var. *Corrensiana* (Lehm.), very luxuriant *Corrensiana* occurs in two forms (which I think grade into one another) : (1) a dark green very hairy form and (2) a less hairy paler green form. Both are represented in Mr. Little's gathering.—E. Drabble.

Veronica serpyllifolia L. forma. Ashcott peat-moor, N. Somerset, Aug. 10, 1932. The small and mostly entire leaves average only 7×5 mm. A few glandular hairs on most

specimens, especially on the carpels. Plant in a very large and dense prostrate clump.—H. S. Thompson.

Euphrasia brevipila Burnat et Gremli ? [2672]. Pasture above Shipham, N. Somerset, June 19, 1932. Young early specimens.—H. S. Thompson. Yes, gathered rather young. —H. W. Pugsley.

Euphrasia brevipila Burnat et Gremli ? [2673]. Meadow by R. Teify, below Garth Mill, Pont Llanio, Cardigan, July 8, 1932. Mauve petals strongly purple veined, and with yellow streak on lip.—H. S. Thompson. Yes, typical specimens.—H. W. Pugsley.

Euphrasia brevipila Burnat et Gremli. [2674]. Asheott peat-moor, N. Somerset, Aug. 10, 1932.—H. S. Thompson. These plants vary and in part appear to be *E. brevipila* × *anglica*. The foliage of some specimens shows long, flexuous, glandular hairs ; and the capsules are shorter and broader than in typical *E. brevipila*.—H. W. Pugsley.

Euphrasia brevipila Burnat et Gremli. [965]. Craignure, Mull, Argyllshire, June 24, 1932.—Leg. K. D. Little. Comm. J. E. Little. Correct.—H. W. Pugsley.

Euphrasia brevipila Burnat et Gremli. [967]. Iona Island, Argyllshire, June 28, 1932.—Leg. K. D. Little. Comm. J. E. Little. Yes, as labelled.—H. W. Pugsley.

Euphrasia brevipila Burnat et Gremli. Aviemore, Inverness, July, 1932.—Leg. K. D. Little. Comm. J. E. Little. Yes, a dwarf form.—H. W. Pugsley.

Euphrasia brevipila Burnat et Gremli. [969]. Loch an Eilean, near Aviemore, Inverness, July, 1932.—Leg. K. D. Little. Comm. J. E. Little. A homogeneous set.—H. W. Pugsley.

Euphrasia brevipila Burnat et Gremli var. *notata* Pugsley. Abundant in pasture near Duneroisk in Glen Lochay, Mid-Perth, June 23, 1932.—E. C. Wallace. Correct.—H. W. Pugsley.

× *Mentha cordifolia* (Opiz) Fraser var. *dourensis* Fraser. Cult. Kew, from the Dour, New Aberdour, N. Aberdeen, Aug. 25, 1932. Differs from the type by having long, slender spikes of purple flowers (not pale pink and stout), and by having more acute serrations to the leaves, etc.—J. Fraser.

Mentha longifolia Huds. Roadside, Witley, Surrey. Aug. 17, 1932.—G. M. Ash. Correct as to species, but the specimen is very much reduced in all parts, the upper leaves being nearly entire, owing to dry conditions and crowding of the stems or by other vegetation. Cultivation can make such specimens normal in a year or two.—J. Fraser.

Mentha pubescens auct. (*M. longifolia* × *aquatica* : *M. hircina* Hull ?) By stream in Valeney Valley, near Boscastle, N. Cornwall, Sept. 15, 1932.—H. W. Pugsley. This plant seems identical with that sent to the Club by Mr. Rilstone from West Looe River in 1926. It does not exactly agree with the account of *M. hircina* or its variety *hirsuta* in Fraser's *Menthæ Britannicae* (Report *B. E. C.* for 1926, p. 221).—H. W. Pugsley. I write the name × *M. palustris* (Sole) Fraser. (*M. aquatica* × *longifolia*). This specimen fits Sole's Plate 6 much better than one from the late A. Bennett's garden, Croydon, originally from Newlyn, Cornwall. Bennett could find no *M. pubescens* Willd. in Willdenow's herbarium. Mr. Pugsley's specimen will not fit *M. hircina* Hull, as he suspects. That is the narrow-leaved form of the hybrid, which Sole, Menth. Brit. Pl. 24, published under the name of *M. piperita sylvestris*, which he says is a little hairy. I have seen no recently collected specimens of Hull's plant. I have a very old sheet collected by Mr. Stonestreet, without date. This has leaves not unlike those of *M. piperita*, but thinly sprinkled with short hairs above, and rather more hairy beneath, with hirsute pedicels.—J. Fraser.

Mentha longifolia × *viridis* (*M. Nouletiana* Timb.-Lag.). Orig. Belfast, Co. Antrim. Cult. Clifton, Bristol, Aug., 1932. —J. W. White.

Mentha piperita L. Roadside, by Norton's Wood, near East Clevedon, N. Somerset, Sept. 4, 1932. Probably an escape from cultivation.—H. S. Thompson and E. C. Wallace. See Report, 1925–26, p. 344 for a useful note by J. W. White, in which he remarks that " In no country has it been shown to be indigenous."—H. S. T. Good specimens dried green, as in the case of Mr. Wallace's Surrey specimens. Many people complain of Mints drying brown, without obvious reason.—J. Fraser.

Mentha piperita L. Ditches on Broadham Green, near Oxted, Surrey, Sept. 10, 1932.—E. C. Wallace. Beautiful specimens of *M. piperita*.—J. Fraser.

Mentha aquatica L. [2669]. Form with leaves ovate-cordate or with truncate base. Walton peat-moor, N. Somerset, Aug. 24, Sept. 4, 1932.—H. S. Thompson. Yes; it is *M. aquatica* L. var. *nicæensis* Briq. I have the following quotation attached to the first sheet of this I collected: *Mentha hirsuta* Huds. B. *Mentha Sisymbrium* dicta *hirsuta*, glomerulis ac foliis minoribus ac rotundioribus. Dill. in Raii Syn. 233. t. 10, f. 1.—J. Fraser.

Mentha sativa L. [2668]. Walton peat-moor, N. Somerset, Aug. 25 and Sept. 4, 1932. Very variable. See note by J. W. White in Report 1925–26, p. 345.—H. S. Thompson. × *M. verticillata* L. (*M. sativa* L.) var. *rivalis* Briq., possibly *rivalis* Wats., though I have not seen a specimen so named by him. I have looked up the reference given by H. S. T. The point I should like to know is whether or not *M. rivalis* Wats. was inclusive of the numerous varieties of the hybrid in the same sense as *M. sativa* L. The late C. E. Salmon said (W. Exch. Rep. 1925–6, 345) that J. W. White's specimens on that occasion were more like *paludosa* than *rivalis*, but if White's specimens were like those of H. S. T., C. E. Salmon was certainly wrong.—J. Fraser.

Mentha sativa L. ? [2667]. A much branched plant. Left bank of R. Chew near Keynsham, N. Somerset, Sept. 13, 1932.—H. S. Thompson. Linnaeus published *M. verticillata* first, and some years later drew his pen through the name, wrote *sativa* and published. That is my reason for writing × *verticillata* L. var. *paludosa* (Sole). This particular specimen is notable for its thinly hairy leaves, but the stems, calyx and pedicels are shaggy enough.—J. Fraser.

Mentha gentilis Linn. With *Apium nodiflorum*, choking a ditch on Broadham Green, Oxted, Surrey. Very luxuriant and varying somewhat, often simulating *M. rubra*. Sept. 10, 1932.—E. C. Wallace. Right for *M. gentilis*.—J. Fraser.

Mentha arvensis L. var. *cuneifolia* Léj. et Court. Cult. Kew; from Thames banks, Hampton Court, Middlesex, Aug. 13, 1932. A sub-glabrous Mint with the leaves attenuated at both ends.—J. Fraser.

Mentha arvensis L. var.-*praecox* (Sole) ? Avon bank, Bath, Aug. 5, 1932.—H. S. Thompson. *M. arvensis* L. f *hirtipes* Fraser. Var. *praecox* (Sole) is sub-glabrous throughout, and grows erect, except when borne down by water.—J. Fraser.

Calamintha Nepeta Savi. Babraham, Cambs., Aug. 24, 1932.—G. Goode. Yes.—E. Drabble. Beautiful, well branched and well flowered specimens of the species.—J. Fraser.

Calamintha ascendens Jord. Miekleham Downs, Surrey, Aug. 7, 1932. This loeality is not specially mentioned in the Flora of Surrey.—J. Fraser. Yes, *C. ascendens* Jord. Obs. 4 and fig. B, plate 1 ; *C. officinalis* Auet. Angl. plur., non Jord. ; *Satureia Calamintha* Seheele.—E. Drabble. Correct, but poor material.—H. W. Pugsley.

Salvia verticillata L. Waste ground, Avonmouth Dock, Bristol, W. Gloster, July 4, 1932.—Ida. M. Roper.

Scutellaria Columnae Tenore. Wooded glen, near Mells, N. Somerset, July 9, 1932. First recorded in June, 1929. See B. E. C. Report, 1929, p. 34.—Ida M. Roper. Several Continental Floras give Allioni as the author of the name.—Ed.

Plantago ramosa Asch. Waste ground, Hitehin, Herts., Oet. 29, 1932.—J. E. Little. Correet.—E. G. Baker.

Plantago arenaria W. and K. Waste ground by Poole Harbour, Dorset, July 22, 1932.—L. B. Hall. Correet.—J. Fraser. Dr. Berguinot, who monographed the Italian Plantains, considers *P. arenaria* Waldst. and Kit. a synonym of *P. ramosa* Aschers.—E. G. Baker.

Herniaria ciliata Bab. Near Mullion, Cornwall. Coll. W. Barratt, Aug. 16, 1902. Comm. S. Lond. Bot. Inst. And Lizard Town, Cornwall, July 31, 1902.—A. O. Hume. Both these are *H. ciliata* Bab. *sensu stricto*, the plant called *H. ciliata* var. *Babingtonii* by Moss.—E. Drabble. See. H. W. Pugsley's useful papers on *Herniaria* in *Journ. Bot.* 1914, 330–332 ; and 1930, 214–218.—Ed.

Amaranthus albus L. Waste groumd, Penarth Road, Cardiff, Glam., Sept., 1932.—A. E. Wade. Comm. N. Mus. of Wales.

Chenopodium polyspermum L. Ashcott peat-moor, N. Somerset, Aug. 10, 1932. Vary variable in form and colour,

but White says in *Fl. Bristol*, p. 505, "The plants of this district met with by me have not appeared referable with certainty to either of the two forms (*spicatum* and *cymosum*) which make up the aggregate."—H. S. Thompson.

Chenopodium album L. var. *paganum* (Reichb.). Waste ground, near Cheam, Surrey, with many other forms and also Atriplices, Oct. 1, 1932.—E. C. Wallace. Correct for the variety of this polymorphic species.—J. Fraser.

Chenopodium urbicum L. [997] var. *intermedium* (Moq.) Seeds. Garden weed, Newport, I. of Wight, Oct., 1929.—J. W. Long. Comm. J. E. Little. Hooker's description (Stud. Flora, ed. 3) of these seeds as "large punctate, not keeled," is correct.—E. Drabble.

Chenopodium glaucum L. Fruits [996] Farmyard, Lurgashall, W. Sussex, Sept. 18, 1931. Leg. G. M. Ash. Comm. J. E. Little. (See B. E. C. R. 1931, 838). The seeds show no trace of acute edge or keel. The statement that the seeds are keeled is erroneous, though it has generally been repeated since the appearance of Moquin-Tandon's Monogr. in 1842. (See *Journ. Bot.*, Jan., 1933).—E. Drabble.

Chenopodium virgatum Thunb. Waste ground, Splott, Cardiff, v.c. 41, July 18, 1929.—R. L. Smith. Comm. N. Mus. of Wales. Given by Nyman and still by Coste among other Continental authors as *Blitum virgatum* L. But Schinz and Keller name it *Chenopodium virgatum* (L.) Jessen. It is the "Epinard-fraise."—Ed.

Atriplex portulacoides L. Salt Marsh, Heacham, near Hunstanton, Norfolk, Aug. 7, 1932.—J. W. Carr. Correct: but why send such a common plant, and then in flower instead of in fruit?—A. J. Wilmott. Though this is so wildly spread in Europe, W. Asia, Africa and N. Am., British (and particularly maritime) specimens are useful on the Continent.—Ed.

Suaeda fruticosa Forsk. Beach, Heacham, Norfolk, Aug. 7, 1932.—J. W. Carr.

Polygonum Raii Bab. Berrow sands, N. Somerset, Sept. 3, 1932. Greatly increased in quantity this year.—H. S. Thompson. Yes, my sheet has good and useful fruiting material; the smooth (not striate-punctate) fruits at once distinguish *Raii* from *P. heterophyllum* var. *littorale* Koch., with which it has sometimes quite inexcusably been confused. —E. Drabble.

Polygonum Hydropiper × *Persicaria* ? One large plant with both parents and two other species on the bank of the Wey at Wisley, Surrey, Aug. 20, 1932. Mr. C. E. Britton agreed with my determination of this plant as a hybrid.—E. C. Wallace. Most probably correct, though surprisingly fertile. Of this hybrid (× *P. hybridum* Chaub.). Rouy remarks "Se présente sans l'aspect du *P. mite* Schrank ou de sa var. *hydropiperoides ;* et il est ordinairement très difficile, en herbier, de distinguer la plante hybride de l'espèce." (Fl. Fr. XII, p. 104 (1910)). These specimens have certainly considerable resemblance to *P. mite* . . . . It will be noticed, however, that the spikes are less leafy and more crowded than in *mite*, and that the ochreae are not so longly ciliate as in that species.—J. E. Lousley. This is *P. mite* Schrank.—H. W. Pugsley. Eglandular and not acrid : where is the *Hydropiper* influence ? We call this *P. mite* Schrank.—E. Drabble and A. J. Wilmott.

Polygonum nodosum Pers. ? Berrow sands, N. Somerset, Sept. 3, 1932. (with E. C. Wallace). Ochreae long and prominent ; black blotches on leaves very conspicuous.—H. S. Thompson. The perianth of the plant sent is eglandular, and the fruits are partly bifacial and partly trigonous. It seems to be *P. lapathifolium* (or possibly *P. nodosum*) × *Persicaria*.—H. W. Pugsley.

Rumex glomeratus × *sanguineus* ? Waste ground, Clifton, Bristol, W. Glos., Sept. 10, 1932. Growing near *sanguineus*. —H. S. Thompson. Mr. E. G. Baker kindly sends Haussknecht's original German description of *R. conglomeratus* × *sanguineus* (*R. Ruhmeri* mihi) which is too long to print. Prof. Danser of Groningen kindly writes : It is quite possible that this is *R. conglomeratus* × *sanguineus* ; but a hybrid between two species so closely allied cannot be recognised from such scanty material.—Danser. I think Mr. Thompson has named this correctly, though I have not previously seen this hybrid. It greatly resembles the plants which have been named *R. viridis* (Sibth.) × *glomeratus*, and the suggested parentage is not improbable.—E. Drabble.

Rumex sanguineus L. Waste ground, Clifton, W. Glos., Aug. 27, 1932. Rare in Bristol district.—H. S. Thompson. Yes.—E. Drabble.

Rumex palustris Sm. (fruits). [653]. Wretton Fen, W. Norfolk, Sept. 22, 1927.—J. E. Little. For notes, see W. E. C. R. 1925, p. 347, and 1927, 444. Again, in 1927, I failed to find *R. maritimus* in Wretton Fen ; but it occurred at Littleport, Cambs., 1927 ; and was gathered at Ringmere, Rondham Heath, S. Norfolk, in Sept., 1926, by Mr. E. F. D. Bloom, in a remarkable dwarf state, the complete plant (which I saw) being only 2in. high, although in good fruit, so that its determination was possible. (B. E. C. R. 1927, 416).—J. E. Little.

Rumex obtusifolius × *sanguineus* ? Waste ground, Clifton, W. Glos., Aug. 27, 1932. Growing with or near *sanguineus*. Fruiting sepals with subulate teeth.—H. S. Thompson. Probably some hybrid of *R. obtusifolius*, and perhaps *R. obt.* × *sanguineus*, though different from the specimens seen by me up to the present ; the latter have much narrower leaves. —D. H. Danser. The (detached) lower leaf on my sheet has unmistakable *sanguineus* characters, while the fruiting sepals seem to indicate *obtusifolius*. I think it is correctly named. —E. Drabble. C. Haussknecht describes *Rumex obtusifolius* × *sanguineus* (*R. Dufftii*) in Mitt. Geograph. Gesell. Jena, III, p. 78. He states, as one would expect, that there are several forms of this hybrid, some approaching *R. obtusifolius*, some *R. sanguineus*. *R. Dufftii* is figured by Reichenbach in his Icones Fl. Germ. XXIV, tab. 173. The fruiting sepals in Mr. Thompson's plant are broader than those figured by Reichenbach.—E. G. Baker.

× *Rumex Weberi* Fisch-Benz. [Ref. D 4]. By a dyke, near the Waterworks, Southover, Lewes, East Sussex, Aug. 21, 1932.—J. E. Lousley. Without any doubt *R. Hydrolapathum* × *obtusifolius*.—D. H. Danser. This is undoubtedly *R. maximus* of the Lond. Cat., *R. Weberi* F.-B. (*Hydrolapathum* × *obtusifolius*) of Druce's List, *R. maximus* auct. ; I do not think its hybrid origin has been established. Very good and useful material.—E. Drabble. I regard this as correct. The inner perianth segments are more decidedly dentate at the base than those of *R. Hydrolapathum* . . . . I think *R. maximus* Schreb. as good as any name, by regarding it as a species.—J. Fraser.

Rumex Patientia L. Fruits [983] Near Gas Works, Hitchin, Herts. (Has persisted since 1921), Aug. 30, 1932.— J. E. Little. The fruits are correct. Outer sepals cordate,

beautifully netted, entire, one bearing one small tubercle ; outer sepals minute.—J. Fraser.

Euphorbia Paralias L. Seedlings. Berrow sandhills, N. Somerset, June 9, 1932.—H. S. Thompson. . . . The cotyledons are like those of *E. exigua*, but the early leaves are like those of *E. Paralias* in shape.—J. Fraser.

Euphorbia exigua L. var. Mayfield, East Sussex, Oct. 23, 1932.—A. H. Wolley-Dod. These specimens may not deserve the rank of variety, but at least are a very peculiar state, due to their immense size. Each plant formed a tuft 18 inches broad and 6 to 8 inches high ; and the dried specimens give no idea of their appearance when growing. I made almost 40 sheets from one plant, with the exception of about half a dozen selected from a second one. The chief feature lies in the broad obliquely truncate base of the leaves, which are usually produced into a lobe on the anterior side. This form is not mentioned in any description known to me. The plants were growing in an old pasture whence the turf had recently been removed, and were associated with such things as *Linaria Elatine* and *spuria*, both quite rare species near here, but probably brought by birds and found an attractive spot for their germination.—A. H. Wolley-Dod. Most interesting.—Ed. Not a variety, but the secondary bracts inordinately multiplied at every fork of the inflorescence. I have seen *E. Peplus* doing this.—J. Fraser.

Ulmus stricta Lindl. "Cornish Elm." Hedge at Minster, near Boscastle, N. Cornwall, Sept. 7, 1932. Leaves only.—H. W. Pugsley.

Salix purpurea L. var. *Lambertiana* (Sm.). In an old hedge, near East Molesey, Surrey. The early collected catkins were not sufficient for all of the sheets, but the late ones show that this variety has a short style, whereas the stigmas are usually sessile in the type. The leaves are those of the adult or *S. Woolgariana* (Borr.) stage of the bush, while the var. *Lambertiana* is the juvenile stage.—J. Fraser.

Salix aurita × *caprea* (*S. capreola* J. Kern.). Merstham Chalk Pits, Surrey, April 13, 1930, July 10, 1932. Reference No. precedes the name on the labels. The hybrid has been confirmed by Dr. Floderus, of Stockholm.—J. Fraser.

Salix repens L. forma *argentea* (Sm.). Ashcott Peat-moor, Somerset, Aug. 10, 1932.—H. S. Thompson. Not exactly Smith's plant, because the leaves are not broad enough. It

was known prior to 1855, and placed under *S. repens* L. forma *incubacea* with very silky leaves. It would be highly desirable that H. S. Thompson should collect the catkins of this in May.—J. Fraser.

Populus candicans Ait. ♀. [738]. Planted, Radwell Mill, Herts. Fls. Mar. 13, 1928. Leg. R. Morse. Lvs. Ap. 13, 1928, Leg. J. E. Little. Correctly named. The viscid leaves are very fragrant till fully developed. Only the ♀ tree is known in Britain.—J. Fraser.

Allium triquetrum L. Hedgebanks in open country, Penally, near Tenby, Pembrokeshire, May 16, 1932. Looks far more ' wild ' here than in the Cornish localities where I have seen it.—J. W. Carr.

Scilla autumnalis L. Cliff near Tintagel, N. Cornwall, Sept. 16, 1932.—H. W. Pugsley.

Juncus compressus × *Gerardi* ? [2670]. Waste alluvial ground by Clifton Bridge Station, N. Somerset, Aug. 17, 1932. By the aid of a trowel these plants were seen to have the far creeping rhizome of *Gerardi* putting up stems at intervals. The capsule is subglobular, obtuse and mucronate as in *compressus ;* and the perianth-segments seem usually to be intermediate in length. The plants however varied considerably, both in height and otherwise.—H. S. Thompson. *J. compressus* with rhizome, which appears to be quite usual in this species and is present in many of the specimens in Herb. Mus. Brit.—A. J. Wilmott and E. Drabble. This seems to be rather an abnormal form of *J. compressus* than a hybrid. I think that very moist soil might account for the creeping rootstock. Is *J. Gerardi* known so far up the river as Clifton Bridge Station ?—H. W. Pugsley. Yes, and I have good, tall specimens of *Gerardi* from close to the *compressus* colony, which latter species does not appear to have been seen there until recently.—H. S. T.

Juncus maritimus Lam. Holme-next-the-Sea, near Hunstanton, Norfolk, Aug. 21, 1932.—J. W. Carr.

Juncus subnodulosus Sehrank. Banks of a rhine, Walton-in-Gordano, N. Somerset, Sept. 4, 1932.—E. C. Wallace.

Potamogeton pusillus L. [Ref. D 31]. Loch Clunie, East Perth, Aug. 11, 1932.—J. E. Lousley. A characteristic lacustrine form of *pusillus* with short leaves having a slightly tapering ± obtuse apex with a small mucro. The lacunae on either side the midrib are well developed.—W. H. Pearsall.

Cyperus fuscus L. Walton peat-moor, N. Somerset, Aug. 25, 1932. All the specimens grew on clearings from the adjoining ditch.—H. S. Thompson.

Eleocharis acicularis R. and S. Abundant in wide mats on margin of a pond on Esher West End, Surrey, Aug. 28, 1932. —E. C. Wallace. Correct.—J. Fraser.

Scirpus triqueter L. Banks of R. Tamar, opposite Gawton, Cornwall, Coll. A. O. Hume, Aug. 7, 1901. Comm. S. Lond. Bot. Inst.

Scirpus maritimus L. var. *monostachyus* Meyer. Berrow salt-marsh, N. Somerset, Aug. 10, 1932. In considerable quantity.—H. S. Thompson. Dr. Drabble points out that etymologically the spelling adopted (from Lond. Cat.) seems better than *monostachys* of Meyer, and as quoted in many 'Floras.' I agree with White and Marshall in regarding this and other named varieties as mere forms or states.—H. S. Thompson.

Carex divisa Huds. Several patches on Mitcham Common, Surrey; some in wet and others in dry situations, July 21, 1932. Not previously recorded from here, I believe. It was discovered by a friend of mine, who also found *Juncus subnodulosus* on the Common in some abundance. Perhaps this sedge, and *Œnanthe Lachenalii* which is also near, are relics of the days when the tidal Thames waters reached these parts.—E. C. Wallace. Apart from locality these specimens are most interesting. The spikelets are less crowded and the glumes more acuminate than in the usual form of *C. divisa*. Unfortunately the fruits on my sheet are very immature, but they seem more elongate and the beak rougher than usual. The leaves are narrow and channelled. Can these specimens come under the British variety for which *C. chaetophylla* Steudel has been suggested ?—J. E. Lousley. An important find, and two interesting notes. It was no less an authority than C. B. Clarke who considered specimens of mine from Seaford, Sussex, 1905, came under the var. *chaetophylla* (Steudel) Kük., and later Bennett, E. F. Linton and Marshall passed as such my 1909 gathering. See Report, 1909–10, p. 262.—Ed.

Carex diandra Schrank. Shapwick peat-moor, N. Somerset, June 25, 1932. Very rare in Somerset. Only two sheets sent. —H. S. Thompson.

Carex vulpina L. forma *interrupta* (var. *interrupta* Peterm.), [2681]. Corner of two roads, S. of Whitchurch, N. Somerset. July 31, 1932.—H. S. Thompson.

Carex contigua × *vulpina* ? [2683]. Growing with both species variably at corner of two roads, S. of Whitchurch, N. Somerset, July 31, 1932. It seems to have the more slender, less-winged culms of *contigua*, the perigynia ± strongly veined as in *vulpina*, and leaves of an intermediate width.—H. S. Thompson. This seems to be weak *C. vulpina* L. The ribbed perigynium agrees with that species, as also does the nut, and the narrow foliage may well be due to depauperation. —H. W. Pugsley. C'est fini !—Ed.

Carex vulpina L. [2680]. Corner of two roads, S. of Whitchurch, N. Somerset, July 31, 1932. Very variable, and growing amidst *C. contigua* over a large area. Having gathered a number of these for further examination it seemed a pity to waste them.—H. S. Thompson.

Carex Goodenowii Gay, var. *juncea* Fr. Pool, Strensall Common, Yorks, v.c. 64, June 5, 1932.—Ida M. Roper. I agree . . .—J. Fraser. This appears to be rightly named, but the specimen does not show the cæspitose rootstock that characterises the variety.—H. W. Pugsley. The two specimens received by me are young, and I am not sure that they are identical, but one of them is clearly a form of *C. aquatilis* Wahl. with elongated spikes, which is not infrequent in the north.—J. E. Lousley.

Carex limosa L. Llyn Traffwll, Anglesey. Coll. C. P. Hurst, July 15, 1905. Comm. S. Lond. Bot. Inst.

Carex capillaris L. Teesdale, Durham. Coll. A. O. Hume, June 22, 1903. Comm. S. Lond. Bot. Inst.

Carex pendula Huds. (Utricles). Parkhurst, Lurgashall, W. Sussex, Aug. 17, 1928.—J. E. Little.

Carex silvatica Huds. (Utricles). Folly Alder Swamp, Hitchin, Herts., July 4, 1928.—J. E. Little. Mr. Fraser says his are *C. helodes* Link (*C. laevigata* Sm.) and gives his reasons. Mr. Little was not likely to be mistaken, and I suggest that the former received by mistake some of Messrs. Ash and Little's New Forest *C. helodes* utricles under the wrong name. Moreover I believe *helodes* is not recorded from Herts.—Ed.

Carex helodes Link. [984]. Utricles, New Forest, Hants., July 29, 1922. Leg. G. M. Ash. Comm. J. E. Little. Correct in every way.—J. Fraser.

Carex helodes Link. Birtley Farm, Witley, Surrey, July 15, 1932.—G. M. Ash. A rare plant in Surrey, although stated in the new Flora to be relatively common in three districts of the county.—H. W. Pugsley.

Carex distans L. [D 26]. By a brackish ditch, Leysdown, Sheppey, East Kent, June 19, 1932.—J. E. Lousley.

Carex saxatilis L. Swampy turf in Coire Fionn Lairige; alt. 2,500 ft. Killin, Mid-Perth, July 1, 1932.—E. C. Wallace.

Carex lasiocarpa Ehrh. Wet bog, close to Shapwick Station, N. Somerset, June 25, 1932. A recently discovered locality. —H. S. Thompson.

Panicum sanguinale L. Waste ground, Penarth Road, Cardiff, Glamorgan, Sept., 1932.—A. E. Wade.

Setaria glauca Beauv. [Ref. D 8]. In allotment ground near the station, Walton-on-Thames, Surrey, Oct. 9, 1932.—J. E. Lousley. Yes.—E. Drabble. Easily distinguished from the more common *S. viridis* by the transverse ridges on the flowering glume.—J. Fraser.

Avena pratensis L. var. *alpina* (Sm.). Grassy rock-ledges on Craig-na-Caillich, Killin, Mid-Perth, June 26, 1932.— E. C. Wallace. Not well marked for the variety. I have a specimen with much broader foliage from Craig-na-Iochan, Loch Tay. Buchanan-White (Fl. Perthshire, p. 347) regards this as a poor variety that passes into the type.—H. W. Pugsley. Right for the variety.—J. Fraser.

Poa bulbosa L. [Ref. D 5]. Abundant, Camber Sands, near Rye, East Sussex, May 23, 1932. A good example of a Spring ephemeral; less than a month after flowering this pretty grass dies down and is difficult to detect.—J. E. Lousley.

Glyceria distans Wahlb. Bank of tidal Avon, below Bristol, W. Gloster, June 14, 1911. The closely allied *Puccinellia retroflexa* Holmb. has not been detected in the Bristol district. C. E. Salmon (*Journ. Bot.* 1929, p. 243) thought it might prove to be the commoner species in Britain.—Ida M. Roper. Usually placed under *Atropis distans* Griseb. and more correctly, according to G. C. Druce, under *Puccinellia distans* Parl.—W. O. Howarth.

[*Lolium temulentum* L.]. Mowing grass between Edington Road Station and Catcott, N. Somerset, June 25, 1932; with A. W. Graveson and J. W. Haines.—H. S. Thompson. This is *Festuca pseudololiacea* Fr. or, according to Hackel's Monograph, *F. elatior*, sub-sp. *pratensis*, var. *pseudololiacea*. —W. O. Howarth. Though only two sheets were sent, I much

regret this error, due to a misunderstanding and my gross negligence.—H. S. T. It is *Festuca pratensis* × *Lolium perenne*.—J. Fraser.

Bromus interruptus Druce. [Ref. D 3]. Near Headley, Surrey, June 4 and July 2, 1932.—J. E. Lousley. Right.—J. Fraser.

Agropyron repens Beauv. Creeping underground stems of Couch Grass. Garden, Clifton, W. Glos., Aug. 18, 1932.—H. S. Thompson.

Agropyron pungens R. et. S. (and two of var. *aristatum* Haek.). Avon bank, Rownham Ferry, N. Somerset, Sept. 11, 1932.—H. S. Thompson. I admit "*A. pungens* R. and S." as correct: but what is *A. pungens*? Ascherson and Graebner give *T. repens* × *junceum* (*T. pungens*), and following them the above grass would come under that name, and more strictly in the section *T. acutum*, which = *T. acutum* DC. I should place 2242 d. "*A. pungens* R. and S. var. *aristatum* Hack." under *T. repens*, eu *repens*, *glaucescens* Engler, or possibly *T. repens*, eu-repens *dumetorum* Döll.—W. O. Howarth.

Agropyron repens × *pungens*? [2676]. Waste ground, near Rownham Ferry, N. Somerset, Sept. 11, 1932. The leaves seem too broad for true *pungens*.—H. S. Thompson. Similarly L.C. 2240 ×, "*A. repens* × *pungens*" I regard *T. repens eu-repens*, var. *aristatum* Döll. sub-var. *subulatum* (Schreb.) Asch. and Graebn.—W. O. Howarth.

Hordeum europaeum All. Hedgerow in lane near Ranmore Common, Surrey, July 19, 1932.—E. C. Wallace. Yes.—E. Drabble.

Polypodium vulgare L. var. Garden of the late R. V. Sherring, Hallatrow, near Bristol, Feb. 27, 1932, after severe frost. He once said the origin was "Scotland, collected by Fraser." Is it a large and extreme form of var. *cambricum*? —H. S. Thompson. Messrs. Drabble and Wilmott say var. *cambricum* Lightfoot. Mr. Pugsley says var. *cambricum* Willd. Mr. J. Fraser's note is more likely to fit the case:—This is the Irish Polypody (*P. vulgare* L. var. *semilacerum*), first found in Ireland, but elsewhere by several people. It was cultivated in Scotland 1860–1878 or longer. Bipinnatifid below, fertile in the upper half.—J. Fraser.

Equisetum palustre L. var. *polystachyum* Weigel. Swamp by the Wey at Shalford, Surrey, Aug. 14, 1932.—E. C. Wallace. Frequent in this part of Surrey. . . . Apparently a very striking "state," perhaps induced by excessive moisture. —J. E. Lousley.

FLORA HELVETICA

PLANTS CONTRIBUTED BY DR. WALO KOCH

Anemone vernalis L. Engadin: Sils-Maria am Abhange der Marmorè. Ca. 1900 m.s.m., Juni 18, 1932.—Leg. Frau E. Koch.

Anemone alpina L. s.sp. *sulphurea* (L.). Engadin: Sils-Maria, am Marmorè—Hang. Waldwiese. Kalkarm. Ca. 1850 m.s.m., Juni 20, 1932.—Leg. Frau E. Koch.

Ranunculus Steveni Andrz. Wiese an der Schmelzbergstrasse in Zürich 6. Ca. 460 m.s.m., Mai 21, 1932.—Walo Koch. Exeellent *Steveni* with well developed rhizome. Very useful for comparison with our British material.—E. Drabble.

Arabis Halleri L. Engadin: Wiesen bei Celerina. Ca. 1730 m., Juni 24, 1932.—Leg. Frau E. Koch.

Thlaspi montanum L. Kt. Aargau: Südhang der Lägern bei Wettingen. Jurakalk. Ca. 520 m.s.m., April 17, 1932.—Walo Koch.

Viola calcarata L. typiea eum var. *flava* Becker atque hybridis. Graubünden: Alp Maran, bei Arosa. Nardetum. Ca. 1980 m.s.m., Juni 30, 1932.—Walo Koch.

Polygala alpestris Rchb. Graubünden: Alp Maran bei Arosa. Nardetum. Ca. 1980 m.s.m., Juni 30, 1932.—Walo Koch.

Trapa natans L. ssp. *muzzanensis* (Jäggi) Schinz. Tessin: Lago di Muzzano bei Lugano. 342 m. Locus classicus! Sept. 15, 1932.—Walo Koch.

Bupleurum gramineum Vill. Monte San Salvatore, bei Lugano, (Tessin). Kalk. Ca. 900 m.s.m., Sept. 14, 1932.—Walo Koch. Briquet made this a sub-sp. of the polymorphie *B. ranunculoides* L.—Ed.

Selinum Carvifolia L. Aargau, Reusstal: Im Schaehen unterhalb Rickenbach. Molinietum. Ca. 390 m.s.m., Aug. 16, 1932.—Walo Koch.

Scabiosa graminifolia L. Tessin: Monte S. Salvatore, bei Lugano. Kalk. Ca. 900 m.s.m., Sept. 14, 1932.—Walo Koch.

Gentiana Kochiana Perr. and Song. Engadin: Alpweiden bei Sils-Maria. Ca. 1830 m., Juni 20, 1932.—Leg. Frau E. Koch.

Plantago alpina L. Graubünden: Alp Maran, bei Arosa. Nardetum. Ca. 1980 m.s.m., Juni 30, 1932.—Walo Koch.

Plantago montana Lam. Graubünden : Alp Maran, bei Arosa. Nardetum subalpinum. Ca. 1980 m.s.m., Juni 30, 1932.—Walo Koch.

[This large group of European Plantagos would form an interesting intensive study. The late Prof. George Henslow said in a paper read at the Linnean Soc. in Nov., 1910, that Hoffman proved by experiment that *P. alpina* and *P. maritima* are identical. The title was "A theoretical origin of *Plantago maritima* L. and *P. alpina* L. from *P. Coronopus* L. vars."

In 1907 I collected *P. alpina* at 2745 m. (9,000 ft.) at Mont Cenis and on the Col de l'Iseran (Savoie) and on Mte. Santa Maria in the Maritime Alps ; at 2760 m. on the Col de la Leisse (Savoie), and at 2530 m. on Aiguille du Golèon. *P. montana* I gathered at 2590 m. (8,500 ft.) on Aiguille du Golèon in Dauphiné, and at 2440 m. on the Col du Galibier and on the Plateau de Paris, near La Grave, above Grenoble. —H. S. Thompson.]

Potamogeton natans L. × *nodosus* Poir. (=*P. Schreberi* Fischer). Kt. Zürich : In der Glatt, bei Glattbrugg. 425 m., Juni 11, 1932.—Walo Koch. N.B.—Infolge der Zartheit der noch jungen Pflanze sind beim Trocknen leider viele Blätter zerrissen.

Naias marina L. Tessin : Luganersee südlich Bissone. Ca. 275 m.s.m., Sept. 12, 1932.—Walo Koch. Allied to *N. major* All. but with longer teeth to the leaves, ending in a subulate, spinulose point.—J. Fraser.

Naias minor All. Tessin : Luganersee, südl. Bissone. Ca. 275 m.s.m., Sept. 12, 1932.—Walo Koch.

Carex alpestris All. Aargau : Goldene Wand bei Ennet-Baden. Trockenwiese. Jurakalk. Ca. 450 m.s.m., April 17, 1932.—Walo Koch.

Festuca varia Hanke. Tessin : Gneissfelsen bei Brissago-Ronco. Ca. 350 m.s.m., Mai 15, 1932.—Walo Koch.

FLORA GERMANICA

Ranunculus aquatilis L. × *fluitans* Lam. In Zürich kultiviert aus dem Wutachflusse bei Waldshut (Baden), Juni 28, 1932.—Walo Koch.

Peucedanum Oreoselinum (L.) Mönch. Hegau : Hügel P. 440 östl. Biethingen. Xerobrometum, Juli 30, 1932.—Walo Koch.

The Flora of the Clyde Area

On going to press the Secretary has received for review this very useful book whose sub-title is *A Handbook of the Flowering Plants and Ferns occurring wild or established within the drainage area of the River and Firth of Clyde.* By John R. Lee, and published by John Smith & Son (Glasgow) Ltd., 1933.—7/6 net.

Nearly 400 pages of neatly printed matter, with descriptions of the species and genera, etc. is preceded by a helpful and interesting Introduction. In regard to the question of nomenclature the author "feels that the avoidance of confusion and inconvenience is a matter of more practical importance than mere conformity." Probably few would disagree with him, in a work of this kind.

On the question of classification and arrangement we are told that in Britain a reaction has set in, tending towards an approximation to the older system of De Candolle rather than that of Engler and Prantl. So a compromise has again been made by Mr. Lee, for he has "adapted the sequence of groups and orders to the general principle of Hutchinson's system, while departing as little as possible from the arrangement hitherto familiar to British students." And Apetalae has been abolished as a separate group.

The enormous Clyde area comprises the whole of Lanark, Renfrew, Dumbarton and Bute; large parts of Ayrshire, Stirlingshire and Argyll, a portion of W. Perth, and small fragments of four other counties. We read that hitherto the most complete record of the occurrence and distribution of plants within the district is the *Glasgow Catalogue* compiled by the late Peter Ewing, F.L.S., who was an original member of this Club.

This neatly bound little volume (7in.×5in.) is easily carried about, and it doubtless will have a very large sale. We think that even a small-scale map of the large area would have been a useful addition.

H. S. THOMPSON.

SUBSCRIPTIONS, 1932

	s.	*d.*
Ash, G. M.	10	6
Bergens Museum	10	6
Bickham, S. H. (the late)	10	6
Biddiscombe, W.	10	6
Bishop, E. B.	10	6
Botanical Dept. British Museum	10	6
Botany School, Cambridge	10	6
Burdon, Preb. R. J.	10	6
Carr, Prof. J. W.	10	6
Catcheside, D. G.	10	6
Dell, J. A.	10	6
Dickinson, Miss D. K. C. (now Mrs. Ash)	10	6
Drabble, Dr. E.	10	6
Druce, F.	10	6
Evans, Dr. A. H.	10	6
Ewing, Mrs.	10	6
Fraser, J.	10	6
Geldart, Miss A. M.	10	6
Goode, G.	10	6
Gray, Dr. H.	10	6
Gregor, Rev. A. G.	10	6
Haines, J. W.	10	6
Hall, L. B.	10	6
Hanbury, F. J.	10	6
Holden, Prof. H. S.	10	6
Howarth, W. O.	10	6
Institut fur spezielle Botanik, Zurich (Dr. Walo Koch)	10	6
Little, J. E.	10	6
Lousley, J. E.	10	6
Martin, Rev. W. K.	10	6
Matthews, Prof. J. R.	10	6
National Museum of Wales	10	6
National Museum, Dublin	10	6
O'Loughlin, J. L. N.	10	6
Pearsall, W. H.	10	6
Pugsley, H. W.	10	6
Ransom, F.	10	6
Rilstone, F.	10	6
Roper, Miss I. M.	10	6
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S. London Bot. Inst.	10	6
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Wallace, E. C.	10	6
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Williams, I. A.	10	6
Wolley-Dod, Lt.-Col. A. H.	10	6
Wright, F. R. Elliston	10	6
	£26	15	6

TREASURER'S BALANCE SHEET, 1932

Receipts	£	*s.*	*d.*
Balance in hand, December 31st, 1931 ...	2	1	1
Subscriptions for 1932	26	15	6
Donations	11	10	0
	£40	6	7

Expenditure	£	*s.*	*d.*	£	*s.*	*d.*
Printing—						
Forty-eighth Annual Report (200 copies) 60 pages and wrapper	34	17	0			
Card and postage		10	0			
				35	7	0
Working Expenses—						
Distributor	1	17	4			
Secretary: Envelopes and postage of Reports		18	6			
,, Part ordinary postage		10	6			
				3	6	4
Balance in hand, December 31st, 1932 ...				1	13	3
				£40	6	7

G. GOODE,
Hon. Treasurer.

31*st December*, 1932.

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Mrs. Ewing, 6 Glennan Gardens, Helensburgh, Dumbartonshire.
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Miss Alice M. Geldart, 2, Cotman Road, Norwich.
George Goode, M.A., 63, De Freville Avenue, Cambridge.
Henry Gray, M.R.C.S., L.R.C.P., Yew Tree Cottage, W. Malling, Kent.
Rev. A. G. Gregor, M.A., B.D., Firle Vicarage, Lewes, Sussex.
John W. Haines, "Midhurst," Hucclecote, Gloucester.
L. Beeching Hall, F.L.S., "Lingdene," King's Avenue, Parkstone, Dorset.
F. J. Hanbury, F.L.S., Brockhurst, East Grinstead, Sussex.
Prof. H. S. Holden, D.Sc., F.R.S.E., F.L.S., University College, Nottingham.
W. O. Howarth, M.Sc., F.L.S., Botany Dept , The University, Manchester.
Institut für spezielle Botanik (Dr. Walo Koch), Eidg. Technische Hochschule, Zürich.
J. E. Little, M.A., 19, The Avenue, Hitchin.
J. Edward Lousley, 7, Penistone Road, Streatham, S.W.16.
Rev. W. Keble Martin, M.A., F.L.S., The Rectory, Coffinswell, Newton Abbot, S. Devon.
Prof. J. R. Matthews, M.A., F.R.S.E., F.L.S., The University, Reading.
National Museum of Wales, Cardiff (Dept. of Botany, H. A. Hyde, M.A., F.L.S., *Keeper*).
John L. O'Loughlin, 21, Corsehill Street, Streatham, S.W.16.

W. H. Pearsall, Green Gable, Matfield, Kent.
H. W. Pugsley, B.A., F.L.S., 81, Alexandra Road, Wimbledon, S.W.19.
Francis Ransom, Newlands, Hitchin.
F. Rilstone, Polperro, Cornwall.
Miss Ida M. Roper, F.L.S., 4, Woodfield Road, Redland, Bristol.
N. Douglas Simpson, M.A., F.L.S., Maesbury, Cavendish Road, Bournemouth.
Macgregor Skene, D.Sc., F.L.S., Dept. of Botany, The University, Bristol.
Prof. Sir Wm. Wright Smith, M.A., F.R.S.E., Regius Keeper, Royal Botanic Gardens, Edinburgh.
Soc. Royale de Botanique de Belgique, 236, Rue Royale, Bruxelles.
South London Botanical Institute, 323, Norwood Road, London, S.E.24 (W. R. Sherrin, A.L.S., *Curator*).
H. Stuart Thompson, A.L.S., 11, Buckingham Place, Clifton, Bristol.
Edgar Thurston, C.I.E., 5, Mortlake Road, Kew, Surrey.
Edward C. Wallace, 2, Strathearn Road, Sutton, Surrey.
Mrs. Wedgwood, 5, Porchester Terrace, London, W.2.
J. Walter White, M.Sc., F.L.S., 18, Woodland Road, Tyndall's Park, Bristol (the late).
Iolo A. Williams, B.A., F.L.S., 10, Mulberry Walk, Chelsea, S.W.3.
Lt.-Col. A. H. Wolley-Dod, Berkeley Cottage, Mayfield, Sussex.

HONORARY MEMBER

James Groves, F.L.S., Trevarthian, Freshwater Bay, Isle of Wight (the late).

WATSON BOTANICAL EXCHANGE CLUB

Owing to the reduced membership and present-day higher costs of printing, it has become increasingly difficult to carry on the Club. Some members desire amalgamation with the Botanical Society and Exchange Club of the British Isles; but others including the Treasurer, the Secretary and the official Referee—think the more satisfactory course would be to close the Club. Incidentally this might be convenient in the event of a possible revival.

Amalgamation would apparently mean that the most interesting and important part of the Club's work, for which both Clubs were started, viz., the exchange and study of interesting and critical (though not necessarily rare) species and varieties, would be reduced to secondary importance.

In any case the Secretary and the Treasurer regretfully feel obliged to resign office this year. Both have had many and pleasant years of official life in connection with the Club, and now with increasing age desire a rest and greater opportunity for other work.

Please say, *as soon as possible*, whether you prefer that the Club shall be closed, or amalgamated with the larger Society, to which about 38 of our 50 members already subscribe.

It is understood from Mr. W. H. Pearsall that a new title, which he feels sure his Committee would approve at their meeting on June 2, (if we amalgamate) will be assumed by the Society, viz. :—

THE BOTANICAL SOCIETY OF THE BRITISH ISLES
(INCORPORATING THE B.E.C. AND WATSON B.E.C.)

11, Buckingham Place,
Clifton, 7 May, 1934

H. S. THOMPSON,
Hon. Sec. and Ed.

Vol. IV., No. 5.

THE FIFTIETH ANNUAL REPORT OF THE WATSON Botanical Exchange Club

1933–34

Referees:

H. W. PUGSLEY, B.A., F.L.S., 81, Alexandra Road, Wimbledon, S.W. 19.

Rev. H. J. RIDDELSDELL, M.A., A.L.S., Bloxham, Banbury.

Distributor:

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Hon. Treasurer:

GEORGE GOODE, M.A., 63, De Freville Avenue, Cambridge.

Hon. Secretary and Editor:

H. STUART THOMPSON, A.L.S., 11, Buckingham Place, Clifton, Bristol.

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SEE NOTE
ON PAGE 248

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THE WATSON
Botanical Exchange Club

REPORT FOR 1933—34

List of Contributors

	Sheets		Sheets
G. M. Ash	71	H. W. Pugsley ...	44
Preb. R. J. Burdon ...	65	Miss I. M. Roper ...	59
Prof. J. W. Carr ...	42	S. London Bot. Inst. ...	60
J. Fraser	96	H. S. Thompson ...	710
G. Goode	15	E. C. Wallace	219
Dr. W. Koch	173		
J. E. Lousley ...	152	Total	1739
Nat. Mus. of Wales ...	33		

Seed Packets : H. S. Thompson - 85.
E. C. Wallace - - 25.

There has been a further fall in the number of sheets of plants contributed, and these have come from fewer members. We have had some gatherings of great interest, including a good series of *Epilobia*, and most of the specimens were beautifully dried. Dr. Koch's Swiss plants were much appreciated, and we note that he was very pleased with his return parcel.

Once again the desirability of gatherings not falling below ten sheets has been made manifest during the work of distributing. [Our Regulations allow six sheets.—Ed.]. It is not always possible or even prudent to get ten sheets of any one plant prepared ; but in the present exchange this minimum could have been reached or exceeded in many cases where fewer than ten were sent.

In addition to our official Referee, Mr. Pugsley, we are indebted for notes upon or determinations of various plants to Messrs. Ash, Britton, Danser, Fraser, Hubbard, Lousley, Pearsall, Thompson, Wade, Williams, and Miss Roper.

EDWARD C. WALLACE,
Distributor, 1933–34.

It was extremely good of Mr. Wallace, when otherwise mueh oeeupied, to put off some of his own botanical work last winter, in order to manage the distribution at somewhat short notiee when Mr. Goode found he was prevented from undertaking it a third time.

The sympathy of every member of the Club is extended to Mr. Goode in the sad loss of his wife on January 5th, after a very long illness.

I must plead guilty to being the chief offender in the matter of short sets. Nevertheless, however disappointing or annoying it may be to a Distributor to deal with many such, even three or four examples of certain gatherings may be quite useful, particularly for placing in public or institution herbaria.

Members will notiee that speeimens of two good plants new to the British Isles were sent to the Exehange, viz., *Veronica praecox* from Suffolk by Mr. Lousley, and *Epilobium adenocaulon* from Surrey by Mr. Ash.

It is with deep regret that we record the death on August 3, 1933, of Dr. Erie Drabble, who of reeent years espeeially had done so much for the Club in examining critical plants and reporting upon them. In the spring of last year, though in a more serious state of health than his letters conveyed, he not only examined plants for us, but in May insisted on helping me in the reading of proofs, when sometimes he eould hardly hold a pen. An excellent portrait and an obituary notice appear elsewhere in this Report.

We also regretfully record the passing of Mr. C. C. Lacaita (1853–1933), a former member of the Club for some years, and occasionally the writer of short notes on plants submitted to him. He had a profound knowledge of European phanerogams (particularly Boraginaceae), and was a man of wide eulture and travel. See *Journ. Bot.* 1933, 259.

To Mr. J. E. Little we can but repeat our feeling of sineere sympathy expressed last year in his long and eontinued illness. Whatever his physical strength may be, his letters, though fewer, indieate that he has lost none of that wide and deep interest in affairs, nor in botany and scholarship in particular.

Mr. H. G. Griffin, Secretary of the C.P.R.E., 17 Great Marlborough Street, W.1, has asked me to mention the carefully compiled and typed Sehedules of Wild Flowers, in

which Mr. Pugsley, as a member of the Technical Sub-Committee of the Wild Plant Conservation Board, has had so large a hand. And particularly the suggestive and useful pamphlet No. 31 on *The Protection of Wild Flowers*, which should have a wide circulation. Copies of the latter may be had at 1½*d.* each from the above address. They should be of special value to school teachers.

Report 1932–33, p. 191 ; *Carex silvatica* Hudson. (Utricles). Folly Alder Swamp, Hitchin, July 4, 1928. Mr. Little wrote last June : " Owing to a much regretted mistake about 6 packets of the *C. helodes* [984] which follows it in the Report, were included under the total number of 16 packets. I have to thank Mr. J. Fraser for pointing out that his packet was *C. helodes*. The differences in the utricles are :—*C. silvatica :* green, turning rusty, 5 mm. long, nerveless or obscurely nerved, suddenly narrowed into a long beak which is smooth or nearly so. *C. helodes :* green, ovoid-trigonous, 5 mm. long, having 3–6 nerves on the two faces, more gradually narrowed into a relatively shorter beak, which is (under a lens) more scabrid at the edge. In *silvatica* the beak occupies a longer proportion of the total length. *C. helodes* has never been recorded for Herts."—J. E. Little.

LAST REPORT : CORRECTIONS.

P. 169, last line but three.—(*Diplotaxis*). The intention was :—

Pod, with stipe and style up to 34 mm. Pedicel up to 22 mm.
or Pod, with stipe and style 32 mm. Pedicel 20 mm.
Stipe 1·0 mm.

i.e., the second line was alternative to the first, for a shorter pod ; in the same way that 2 measurements were given for *D. muralis* var.—J. E. Little.

P. 177, 12 lines from bottom.—For indivisés read indivises.

P. 186, line 7.—For sans read sous.

P. 187.—For D. H. Danser (twice) read B. H. Danser.

P. 191.—*C. silvatica* utricles, see note above.

The editor was disappointed to find that last year's Report was pinned instead of being sewn, even though our good printers did so in the interests of speed and hence cost.

H. S. THOMPSON,
Hon. Sec. and Ed.

May 14, 1934.

Eric Drabble (1877–1933).

The number of distinguished British botanists who have passed away during the last few years amounts to a tragedy. Eric Drabble, D.Sc., F.L.S., was not only a good taxonomic botanist, who had specialized in several genera, and especially in the *Melanium* section of *Viola*, but he was a botanist in the broad sense who had for years taught and examined in Botany, and as a physiologist he had published articles in various periodicals including the *Bio-Chemical Journal*.

He was born in 1877 at Herne House, near Chesterfield, and first went to the local Grammar School. At 22 he proceeded to University College, Sheffield, and subsequently to the Royal College of Science, South Kensington, where he took the London B.Sc. degree, with 1st class Honours in Botany. In 1901 he became Lecturer in Botany at St. Thomas's Hospital Medical School, and in 1903 Lecturer and Senior Demonstrator in Botany at the Royal College of Science. In 1903 he also became D.Sc. London; and his thesis "On the Anatomy of the Roots of Palms," was published by the Linnean Society (*Trans. Linn. Soc.* ser. 2, 1904). After two years at S. Kensington he was appointed Lecturer in Economic Botany at the University of Liverpool, but in 1908 he returned to London as head of the Botanical Department at the Northern Polytechnic. Ill-health in 1924 caused his retirement to Freshwater, Isle of Wight.

Asthma and heart trouble debarred him from active service during the War, but he helpfully combined the botanical work of the Birkbeck College with that of the Northern Polytechnic. At Freshwater he recovered sufficiently to be examiner in botany and biology for London and other Universities; and he managed to do a considerable amount of work in taxonomy, including the examination of plants and writing notes thereon for both the Exchange Clubs until (and we fear partly during) the long illness which culminated in his death on 3rd August.

Drabble's earliest contributions to the *Journal of Botany* did not appear until 1906, when five short notes were printed. Other papers followed up to 1916, the chief being "The British Pansies," issued as a Supplement in 1909, and "Notes on the Flora of Derbyshire" in four parts. In 1926 he resumed writing, and in each subsequent year produced papers in the *Journal of Botany* and in the B.E.C. Report, while from 1907 he had been sending notes to the Watson

ERIC DRABBLE, D.Sc.

Exch. Club which he joined that year. His longer papers on British plants referred to above dealt chiefly with the British Pansies, and latterly he wrote also on *Arenaria serpyllifolia*, *Veronica agrestis*, *Ranunculus acris* and *R. bulbosus*, *Crepis* and *Valeriana*.

Drabble was elected F.L.S. in 1902, and after the death of C. E. Salmon he kindly consented in 1930 to act as a referee of this Club. He also became a subscribing member again, for his earlier membership did not last more than ten years. But there were few years since 1907 when we have not had the benefit of his useful notes.

He and I had never met, but of recent years I enjoyed his letters more and more; and it is not surprising to read in Mr. Pugsley's notice in *Journ. Bot.* 1933, p. 319, (from which we are allowed to quote freely), that "his pleasant humour and generous help to correspondents brought him a large number of friends." Nor were his interests entirely confined to botany, "for he was a lover of English literature and always keenly interested in the Northern Polytechnic Operatic Society. He was a zealous Anglo-Catholic."

To his widow, who often collaborated in his botanical work, we are indebted for the loan of an excellent portrait.

H. S. T.

Notes on the History of the WATSON BOTANICAL EXCHANGE CLUB (1884–1934).

The Watson Botanical Exchange Club was formed in December, 1884, chiefly by the initiative of A. R. Waller of York and later of Cambridge, and Arthur Bennett of Croydon, the first Referee. It was of course named in honour of Hewett Cottrell Watson (1804–1881) who published so much on British Topographical Botany.

Early in January, 1885, members were invited to send dried plants for the first exchange, which took place in February. Twenty-five parcels containing about 2,250 sheets of specimens were received. The study of critical species was a main object from the start. Prof. Babington, James Backhouse (1825–1890), and the Rev. J. E. Leefe respectively "identified several doubtful specimens of *Rubus*, *Hieracium* and *Salix*." Members were asked "to keep a good look out for any plants

which seem to differ from their normal types. In particular . . . forms of *Carex*."

But only one page in the first brief Report was devoted to comments on a few of the plants contributed. Prof. J. W. Carr, then at Cambridge, is the only present member in the first list; and we doubt if any others are alive in 1934 except "J. Percival, St. John's College, Cambridge," and Mr. R. F. Towndrow of Malvern. But the widow of Peter Ewing (also in the first list) has very kindly been a subscriber ever since her husband died in 1913.

The second Annual Report gives a list of 28 members who together contributed no less than 4,754 specimens. And the first List of Desiderata appeared in that Report. The total of the next year, 4,971 sheets, was the largest contribution in the history of the Club. Among the contributors were Messrs. J. Percival, Lloyd Praeger and C. Waterfall, who are happily still living. And that year's List of Members included the present Secretary, then a boy at Bootham School, York.

The exchange was undertaken by the Secretary the two first years, but subsequently it was taken in turn by different members, P. Fox Lee acting in the winter of 1886–7, and he was followed by E. F. Linton and then Father Reader. By 1890 the contributions had fallen to 1,775, but the next year 4,158 was the number.

During these fifty years there have not been more than about 226 members; and some 120,000 sheets of specimens have been distributed: also many packets of seeds and fruits. In 1925 the late Dr. Druce said that "during his term of office (24 years) something like 140,000 specimens had been distributed" by the Botanical Soc. and Exch. Club of the British Isles (*Report* for 1925, 937). One of the Watson Club's revised Regulations reads: "No plant should be gathered for exchange if by so doing there is risk of serious diminution in any locality. Some of the scarce Trefoils, Orchids, Lilies, Orobanches, Saxifrages, and other very rare plants growing in small quantity are totally forbidden."

Of the twenty-nine Distributors Messrs. E. S. and C. E. Salmon acted five times consecutively; Reader four: W. R. Linton, J. E. Little, Miss I. M. Roper, and E. C. Wallace three times; A. R. Waller, Wm. Bell, Wm. Barclay, W. R. Sherrin, and George Goode twice; and the following eighteen

members acted thus once, viz., P. Fox Lee, E. F. Linton, H. E. Fox, F. H. Ward, A. H. Wolley-Dod, H. W. Pugsley, S. H. Bickham, F. H. Davey, A. B. Jackson, E. Drabble, McTaggart Cowan, H. S. Thompson, Prof. Carr, W. H. Pearsall, A. E. Wade, F. J. Sheldon, D. G. Catcheside and J. E. Lousley.

Only four persons have acted as Hon. Secretary and Editor of the Report, viz., A. R. Waller, T. A. Cotton (about 9 years), H. S. Thompson (for 5 years and again since Novem., 1920); and George Goode (1905 to Nov., 1920).

The thankless post of Hon. Treasurer has been held by the following five gentlemen, viz., P. F. Lee, J. T. Powell, Alex Somerville, S. H. Bickham and George Goode, the last-named since 1920 after he had been Hon. Secretary about sixteen years.

The official Referees in chronological order, though of course overlapping in several cases, were Arthur Bennett (18 years), Prof. Babington, J. G. Baker, W. Moyle Rogers, E. F. Linton, W. R. Linton (1904–1906 only), E. S. Marshall, Augustin Ley, C. E. Salmon, H. J. Riddelsdell (since 1916), H. W. Pugsley (since 1921), and Eric Drabble (from 1930 to his death in 1933).

In addition, among many other botanists who from time to time have kindly examined and reported upon critical or doubtful plants may be mentioned James Groves, W. Barclay, E. G. Baker, Col. Wolley-Dod, J. Fraser, A. B. Jackson, C. E. Moss, C. E. Britton, J. E. Little, C. Bucknall, J. W. White, A. J. Wilmott, W. O. Howarth, W. C. Barton, Mrs. Gregory, S. T. Dunn, J. E. Lousley, etc. Also we have been grateful for help from several distinguished Continental botanists, including Hackel, Kükenthal, Briquet, Danser, Ronniger and others.

Annual or periodical Desiderata Lists ceased to be published after 1912, but we believe with no great disadvantage. It has been increasingly the custom to send abnormal forms and varieties and occasionally hybrids of common or uncommon plants, together with examples of critical genera; though fewer of the largest genera such as *Hieracium*, *Rosa* and *Rubus* have been contributed of late.

In 1921 it was agreed among some of the more active members to invite several good Continental botanists to join the Club, and in 1922 Dr. Holmboe, then Director of the Bergens Museum (followed by Dr. Nordhagen), and the late

Carl Lindman of the Riksmuseum, Stockholm, became members ; and the late Dr. Briquet of Genève sent us 300 sheets of duplicates, chiefly collected c. 1855 by E. and A. Huet du Pavillon in Sicily, Switzerland and the Pyrenees. Messrs. C. C. Lacaita and J. W. White also gave useful Continental specimens in 1923 ; and for a few years Dr. Karl Rechinger of Vienna was a contributing member. In 1931 Dr. Walo Koch of Zürich joined, and has sent each year beautifully dried sets of interesting or rare Swiss plants.

For some years we have received in exchange for our Reports the Bulletin de la Soc. Royale de Belgique, and more recently Natur und Museum, a well illustrated monthly magazine published at Frankfurt-am-Main. Both these periodicals have been regularly placed on permanent loan in the Botany Department of the University of Bristol.

A copy of our Annual Report has for very many years been given to The Linnean Society, the Royal Botanic Gardens, Kew, the Bodleian Library, University Botanical Library at Oxford, Cambridge University Library, C. U. Botany School, National Library of Wales, National Library of Ireland, Trinity College Library (Dublin), Birmingham Central Public Library, Botanical Society of Edinburgh, Croydon Nat. Hist. Society, Somersetshire Archaeological and Nat. Hist. Soc., Lloyd Library, Cincinnati, Conservatoire Botanique de Genève, the editor of The Journal of Botany, the editor of the " B.E.C." (in exchange), and to several British botanists, especially those who as non-members have helped to identify critical plants. Also to the British Museum (Nat. Hist.) and the Royal Botanic Garden, Edinburgh, who subsequently became subscribers. A few years ago a great effort was made by the Treasurer and the Secretary to complete as far as possible the sets of some of the above, and also of members.

It has long been the custom, whenever possible, to give small parcels of interesting specimens, particularly of critical species, to several non-subscribing institutions such as Kew, the British Museum (Nat. Hist.), Cambridge University, and the R. Botanical Gardens at Edinburgh. The three last became subscribers some years ago. And it has doubtless been usual for any Referee to have the option of keeping a specimen of any plant sent for his opinion.

Especially since about 1910 the Club has suffered much through the great paucity of Scotch and Irish members of

the latter there were perhaps never more than one or two at a time. The same has applied to Wales, though after Mr. J. E. Griffith retired in 1921 the National Museum of Wales has sent small but useful contributions every year.

Occasionally our Reports have comprised short but helpful papers, such as Mr. Pearsall's "Hints on collecting and mounting linear-leaved Aquatics," 1921; Mr. Sherrin's "Key to British Junci," 1923; and Mr. Little's translation of the Keys to the sub-species of the *Erophila* Section of the genus *Draba*, from Rouy and Foucaud's and Clavaud's works; also his "*Spartina Townsendi*" (both in 30th Report, 1915).

Owing largely to the comparatively small circulation, one would hardly expect to find any new species first described in the Reports, though one or two species or varieties new to Britain may have been first recorded here. A passing reference may however be made to the considerable number of plants new to science or to the British Isles which our valued member Mr. H. W. Pugsley has described either in the *Journal of Botany*, the *Journal of the Linnean Society*, or the *Journ. R. Hort. Soc.* Specimens of several of these novelties have passed through the Club from time to time.

From the very beginning of the Club to almost the end the large number of Clergymen and members of the Society of Friends is a not uninteresting feature. The well known longevity of these two classes of the community may partly account for the fact that there were not more than 226 subscribers in the half century. Incidentally three of the four Secretaries were Quakers.

H. S. THOMPSON.

Ranunculus sphaerospermus Boiss. et Bl. [Ref. 1697]. Basingstoke Canal, near Odiham, N. Hants, v.c. 12, May 20, 1933.—A. L. Still, Comm. E. C. Wallace. Yes. Many of the finest specimens in Britain have been collected in this canal. Since the publication of my paper in 1928 I have examined those in Herb. Hort. Bot. Reg. Kew, where some exceptionally fine plants collected by L. A. M. Riley from the Basingstoke Canal in May, 1922, are to be seen. Nos. 173, 177 and 179.—W. H. Pearsall.

Ranunculus acris L. var. *tomophyllus* (Jord.) ? Swampy meadow near Pensford, N. Somerset, May 13, 1933.—H. S. Thompson.

Caltha palustris L. var. *Guerangerii* (Bor.). Holmsley Bog, Beaulieu, S. Hants, v.c. 11, May 29, 1933.—I. M. Roper. Flowers smaller than the type ; sepals not overlapping. I agree.—J. Fraser. These seem to be well-marked specimens of the variety, showing the distinctive foliage, petals and carpels.—H. W. Pugsley. The follicles on the specimens received are far from ripe, but they appear to taper into the beak rather more gradually than in the usual British *C. palustris*. The crenation of the upper leaves, and arrangement of the sepals might justify the inclusion of these specimens under *C. Guerangerii* as defined by Boreau (*Bill. Annot.* 1856, p. 11), but as pointed out by Dr. Huth in his *Iconographie der Gattung Caltha* this can only be retained as a form. Huth states that after examining hundreds of specimens he found no constancy in the characters of the flowers, leaves, and fruits. See also Purchas & Ley, *Fl. Hereford.* p. 9 (1889) ; and notes in *Rep. B.E.C.* 1871, p. 9 ; 1889, p. 244 ; 1893, p. 399 ; 1895, p. 466 ; and 1904, p. 9. Even Boreau remarks on the fact that his plant sometimes occurs with the type (*Fl. du Centre.* II, p. 21 (1857)).—J. E. Lousley.

Nasturtium sylvestre R. Br. and *N. palustre* DC. with rosettes of root-leaves for comparison. Blagdon Reservoir and Chew Magna Reservoir, N. Somerset, Sept. and Oct., 1933.—H. S. Thompson. This (*sylvestre*) has the lobes of the leaves more deeply cut on the posterior side than *N. palustre*. The pods or silicules are very distinctive between the two.—J. Fraser.

Barbarea vulgaris R. Br. Autumnal root-leaves, to show variation. Side of stream, Bishopsworth, N. Somerset, Nov. 7, 1933.—H. S. Thompson.

Sisymbrium officinale Scop. Fine autumnal root-leaves, which often die down before summer. Corner of arable field, near Pensford, N. Somerset, Sept. 29, 1933.—H. S. Thompson.

Brassica nigra Koch. Near Hereford, July 5, 1933.—R. J. Burdon. I agree.—J. Fraser.

Capsella Bursa-pastoris Medik. [var. *grossa* E. At.]. Waste ground, Cardiff, Glam., v.c. 41, June 9, 1933.—A. E. Wade. Comm. Dept. of Botany, National Museum of Wales. Since

naming the above I have seen the original description and figures of the capsule of *grossa* and find that my specimens do not agree with it. It does not appear to agree with any form of *Capsella* so far recorded for Britain.—A. E. Wade. Dr. Almquist does not give this name in his descriptions of the English plants (B.E.C. Report, 1920, pp. 191–207). Is Mr. Wade's plant more than a robust form of *C. batavorum* ? —I. M. Roper. This is not *C. B.-p.* (L.) *grossa* E. At., which is a plant with large silicules (7–8×5 mm.) whereas Mr. Wade's plant has small silicules (5×4). For accurate identification examples should be sent to Dr. Almquist.— C. E. Britton.

Capsella Bursa-pastoris Medik. var. *trevirorum* E. At. Waste ground, Cardiff, Glam., v.c. 41, June 14, 1933.—A. E. Wade. Comm. Dept. of Botany, National Museum of Wales. I agree.—C. E. Britton.

Silene nutans L. Old quarry in Mountain Limestone, Llandrillo-yn-Rhos, Colwyn Bay, Denbigh, June 23–28, 1933. For comparison with the Derbyshire and Nottinghamshire specimens sent previously.—J. W. Carr. Typical *S. nutans* L.—H. W. Pugsley. These fruiting specimens give an intimation of the shortness of the carpophore. The leaves on one strong specimen are the broadest I have seen in the species.—J. Fraser.

Stellaria aquatica Scop. Dwarf plants with purple blotched leaves, growing abundantly with the normal plant on the dried mud at Blagdon Reservoir (s. side), Oct. 13, 1933. No plants more than about a foot high, and very few had yet flowered. Dr. A. H. Campbell finds no sign of fungus attack, and regards as very feasible the suggestion of Dr. Nierenstein (Bio-Chemist) that the dark purple stains are due to traces of tannin in the plant, owing to the presence of iron in the water. Succulently brittle when fresh, immediately becoming limp in the press and very flaccid, *S. aquatica* is a most difficult plant to dry well.—H. S. Thompson. The purple splashes on the leaves are peculiar, and I would not associate them with fungi, nor any peculiarity of soil. Similar splashes occur constantly on the pods of some varieties of Kidney Beans, and different varieties of Scarlet Runners occasionally show them on the pods.—J. Fraser.

Fresh speeimens of *Stellaria aquatica* from Blagdon, May 4, 1934, were sent to Kew, and the Assistant Direetor kindly wrote : " . . . We have done a few rough experiments on it to test whether the purple eolour of the blotches is due to an anthoeyanin pigment or not, and I think we can definitely say that it is. This makes the tannin and iron theory of the colouration highly improbable. Further one would imagine that all plants growing in that partieular habitat would be similarly affeeted if it were due to a local eondition. It seems to me that it is more probable that it is either a genetieal form of the nature of a mutation or, eonceivably, a baeterial disease whieh sometimes, in other plants, takes this particular form."—John S. L. Gilmour.

Elatine hexandra DC. Muddy pond on Whitmoor Common, Surrey, Sept. 3, 1933.—E. C. Wallaee.

Hypericum perforatum L. var. Newton Abbot, S. Devon, July 22, 1933.—R. J. Burdon.

Tilia cordata Mill. Bedford Purlieus, near Wansford, Northants. *Fl.* July 23, *Fr.* Oet. 8, 1933. Flowering and fruiting in abundanee here this year.—J. W. Carr. Very small glaueous leaves with axillary tufts of red hairs ; quite eorreet.—J. Fraser.

Tilia cordata Miller. Small leaved form from one large tree near Madgett Farm, above Wye Valley, W. Glos. A few speeimens with larger leaves and no fruit from Wyndeliff Woods, Monmouth, July 21, 1933, with J. E. Lousley.—H. S. Thompson.

Linum anglicum Mill. (*L. perenne* Linn.). Roman Road, Gog Magog Hills, Cambs., July, 1933.—G. Goode. Strietly *L. perenne* auet. Brit. non Linn.—Ed.

Euonymus europæus L. White eapsuled form, Croxbottom, N. Somerset (v.e. 6), Nov. 7, 1933, with Mrs. Sandwith. See *Journ. Bot.* 1912, 377. As De Candolle says, *Prod.* 2, p. 4 (1825), *β leucocarpus*, fruetibus pallidis, arillis seminibusque albis, whieh Rouy puts literally into French : " Fruits pâles ; graines et *arilles* blanes," we ean hardly place our plant there, for it has the normal deep orange aril. But is it possible DC. made a slip as to the aril being white ? We have seen no deseription of Druee's var. *leucocarpus*, whieh hitherto has been regarded as a synonym of D C.'s.—H. S. Thompson. This will

not do for De Candolle's variety which is described in his *Prodromus* II. p. 4, as having a pale fruit and both seeds and aril white.—A. E. Wade.

Vicia bithynica L. var. *angustifolia* Syme. Near Exmouth, S. Devon, June 23, 1933. Growing with the type, but more abundantly.—H. S. Thompson. Yes; the narrow-leaved form of the species, which resembles a Lathyrus.—J. Fraser.

Rubus opacus sub-sp. *nobilissimus* Watson ? Flowers pink, Sharpham Moor Plot, N. Somerset, v.c. 6, June 15, 1933.—H. S. Thompson. Yes.—Wm. Watson. I regret I did not find time to gather more of this, which is frequent in that district.—H. S. T.

Rubus ———. Leonard Stanley, Gloucestershire, July 8, 1933.—R. J. Burdon. This is *R. caesius* × *ulmifolius*.—Wm. Watson.

Sorbus pinnatifida Ehrh. (*scandica* Fries) ? Bank of R. Avon, below Leigh Woods, N. Somerset, June 3, and July 20, 1933.—H. S. Thompson. Yes; *S. scandica* Fr. (*S. intermedia* Ehrh.) readily separable from *S. Mougeoti* var. *anglica* Hedlund by its yellowish tomentum. A doubtful native in Britain, and usually planted or bird-sown.—H. W. Pugsley.

Sorbus decipiens Bechst. Border of Leigh Woods, N. Somerset, Aug. 6, 1933. From the tree (now layered) visited by three London botanists, June 3, 1932. (Formerly known as "*latifolia*").—H. S. Thompson.

Hippuris vulgaris L. with flaccid leaves and seedling plants. Barrow Gurney (middle) Reservoir, N. Somerset, Oct. 6, 1933. From the dried up area.—H. S. Thompson.

Myriophyllum verticillatum L. [Ref. 1765]. Marsh ditches near Lewes, E. Sussex, v.c. 14, Aug. 27, 1933. Fruiting spike with very long leaf-like bracts, raised well above the water.—E. C. Wallace. The typical form of the species with long floral bracts, which are well furnished with fruit.—J. Fraser.

Myriophyllum spicatum L. Barrow Gurney (middle) Reservoir, N. Somerset, Oct. 6, 1933.—H. S. Thompson. Yes.—E. C. Wallace. The sheet sent me shows no flowering spikes and without these it is impossible to give a stable determination. Little dependence can be placed upon the number of leaves in a whorl in the determination of a species.

This often varies on the same plant. In *M. alterniflorum* it may be 3 or 4, in *M. spicatum* more usually 4 (but may be 3 or 5 on occasion) and in *M. verticillatum* it is more often 5 than fewer. I trust Mr. Thompson will be able to gather this again in a flowering eondition.—W. H. Pearsall. Of a Blagdon Lake specimen, Scpt 5, 1933, Mr. Fraser says it seems right for *M. spicatum* ; but an inflorescencc would have settled the matter. I could find or reaeh only one flowering spike at both Reservoirs.—H. S. T.

Callitriche [*stagnalis* Seop. ? var. *platycarpa* Kuetz.]. Chew Magna Reservoir, N. Somerset, Oet., 1933. Some of it in large prostrate patches on the mud.—H. S. Thompson. Hegelmaier in his Monograph insists that ripe fruit is essential for the eorreet determination of speeies in this genus, and the late Arthur Bennett often deelared that without fruits it was ' mere guess work.' On my sheet there are none, but the leaves and habit are not those of *C. stagnalis*, our largest speeies. Aeeording to Kützing the var. *platycarpa* has the lowest leaves 11–12 mm. long " eetera varia plurimum obovata 16–18×5–6 mm." The largest leaves on my sheet are only 8×2·5 mm. In my judgment the plants are not *C. stagnalis* nor its var., but more probably *C. polymorpha*. I should mueh like to see mature fruits of these plants this year.—W. H. Pearsall. I was misguided by two somewhat similar sheets in my herbarium from Rotten Park Reservoir, Birmingham, 1893, whieh had been named for me by the late W. R. Linton. —H. S. T.

Callitriche truncata Guss. var. *occidentalis* Rouy. [Ref. 1762] Muddy and/or sandy bed of R. Derwent, Chipstead, W. Kent, v.c. 16, Aug. 26, 1933. Growing submerged in the swift stream and forming oval elumps.—E. C. Wallaee. Exeellent material of a rare plant, although not flowering.—H. W. Pugsley. The leaves of these speeimens are narrowed at the base, widened upwards, and rounded at the apex with a small noteh or two teeth. They are also wider than any deseriptions and figures allow, so it may be Rouy's variety. I fail to find any fruit, and these water-weeds are rather polymorphie in the leaves.—J. Fraser.

Epilobium : Mr. Ash agrees to the naming of all the *Epilobia* sent him, but does not think it neeessary to write a short ' yes ' to eaeh. He has kindly written a few notes when he thought there was something of interest to say.—Ed.

Epilobium angustifolium L. (probably) seedlings. Chew Magna Reservoir, N. Somerset, Sept., 1933.—H. S. Thompson.

Epilobium hirsutum × *parviflorum*. [Ref. Ep. 86]. Peasmarsh, Surrey, July 31, 1933. These sheets are for the most part from two large plants growing among abundance of the two parents. They disagree in several respect from Haussknecht's description of the hybrid.—G. M. Ash. I agree.—J. Fraser.

Epilobium parviflorum Schreb. Seedlings. Chew Magna Reservoir, N. Somerset, Sept., 1933.—H. S. Thompson.

Epilobium parviflorum Schreb. Corner of pasture, near Frenchay, W. Glos., Aug. 5, 1933.—H. S. Thompson. All passed as correct by Mr. Ash when in Bristol. Correct.—J. Fraser.

Epilobium parviflorum Schreb.; perhaps × *hirsutum*. Shapwick Peatmoor, Somerset, Aug. 22, 1933.—H. S. Thompson. My sheet has all the characters of *E. hirsutum* L. though the leaves are below average size . . . .—J. Fraser.

Epilobium montanum L. Growing with or near *E. lanceolatum*, one or two being hybrids. Glen Frome, near Bristol, W. Glos., Aug. 5, 1933.—H. S. Thompson. Correct.—J. Fraser.

Epilobium montanum × *obscurum*. [Ref. Ep. 87]. Kitchen Garden, Lower Birtley Farm, Witley, Surrey, Aug. 1, 1933.—G. M. Ash. The specimen received looks almost like *E. obscurum*, but the relatively large flowers, with 4-fid stigma, show the influence of *E. montanum*.—H. W. Pugsley. I agree.—J. Fraser.

Epilobium lanceolatum Seb. et Maur. Fowey, Cornwall, v.c. 2, Sept. 6, 1933. [No. 499].—H. W. Pugsley.

Epilobium lanceolatum Seb. et Maur. Glen Frome, W. Glos., Aug. 5, 1933.—H. S. Thompson.

Epilobium roseum Schreb. Vegetable garden, near Chew Magna, N. Somerset, Sept. 15, 18, 1933.—H. S. Thompson. My sheet shows no flowers, but the plant seems to be correctly named.—H. W. Pugsley. Correct; a species very fond of gardens.—J. Fraser.

Epilobium roseum Schreb. Holford Village, S. Somerset, Aug. 10, 1933.—H. S. Thompson.

Epilobium tetragonum Curt. [Ref. Ep. 90]. Allotments near Kingston, Surrey, July 15 and Sept. 8, 1933.—G. M. Ash. Wonderfully well developed *E. tetragonum* . . . .—J. Fraser.

Epilobium obscurum Schreb. [Ref. Ep. 89]. Brickworks, Brook, Godalming, Surrey, July 29, 1933.—G. M. Ash.

Epilobium obscurum Schreb. [Ref. 1764]. Marshy field, West of Godstone Green, Surrey, July 15, 1933.—E. C. Wallace. This is the typical form of *obscurum* growing in damp unshaded ground, in close competition with other plants.—G. M. Ash. Mr. Fraser says his specimen is *E. tetragonum.*

Epilobium obscurum Schreb. Miss Sherring's garden, Hallatrow, N. Somerset, Aug. 1, 1933.—H. S. Thompson. This plant to me approaches closely to Haussknecht's description of ' forma *strictifolia.*'—G. M. Ash.

Epilobium obscurum Schreb. Holford Village, S. Somerset, Aug. 10, 1933.—H. S. Thompson. The broad leaves and distinct petioles are characteristic of wet shady situations.—G. M. Ash. I agree.—J. Fraser.

Epilobium obscurum × *parviflorum.* [Ref. Ep. 85]. Pond edge, Hambledon, Surrey, July 24, 1933.—G. M. Ash. The specimen received has the habit and more or less the indumentum of *E. parviflorum*, but the capsules of *E. obscurum.* Very few of the seeds are perfect.—H. W. Pugsley. I agree. —J. Fraser.

Epilobium Lamyi Schultz. [Ref. Ep. 75]. Young plants. Disused allotments, Kingston, Surrey, July 12, 1933.—G. M. Ash. Correct. The short petioled form.—J. Fraser.

Epilobium Lamyi × *tetragonum.* [Ref. Ep. 74]. Disused allotments, Kingston, Surrey, July 12, 1933.—G. M. Ash. I have some doubt as to the naming of these plants. They may be *Epilobium Lamyi* Schultz.—G. M. Ash. The decurrence of the base of the leaves of *E. tetragonum* has been partly and wholly obliterated by *E. Lamyi.*—J. Fraser.

Epilobium adenocaulon Hausskn. [Ref. Ep. 103]. Edge of shaded stream, Riee's Lane, Witley, Surrey, Oct. 5, 1933.—G. M. Ash. I marked the labels of these plants with a ' ? ' since I had, at the time, doubt as to the correct naming. Mr. Noel Sandwith kindly sent some plants I had gathered in 1932 to Dr. Samuelsson in Stockholm and he says ' certainly

E. adenocaulon.' *E. adenocaulon* in south-west Surrey is abundant, growing in apparently wild situations such as copses and stream-sides far from dwellings and also commonly in such localities as railway sidings, kitchen gardens and timber yards. It is as common as any other *Epilobium* about Witley, Godalming and Eashing. I distributed specimens to the W.B.E. Club in 1932 as " Epilobium hybrid (stigma nearly clavate) ; Field edge, Birtley, Witley, Surrey, June 23, 1932," when however I misled the referees by suggesting a hybrid and by describing the stigma as ' nearly clavate ' instead of ' shortly clavate.' The plants collected June 23, 1932, are typical small plants of the species in Surrey ; large plants reach to six feet high, but the plants distributed this year [Ref. Ep. 103] are *not* typical of the ordinary plant, but are from a muddy situation gathered to show the striking rosettes.

In the field *E. adenocaulon* Hausskn. may be readily recognised by its upright growth, much branched above, the stem being glabrous towards the base except for a few hairs on the more or less well marked decurrent lines ; by the upper half or more of the plant being densely covered with crisped and patent glandular hairs, the glands being very noticeable in the sunshine ; by the stigma being clavate but much smaller than in *E. obscurum* etc. ; by the leaves being shortly stalked, with their base not unlike that of *E. montanum*, but much longer and attenuated at the apex ; by the noticeably small flowers (smaller than in any other Epilobium in this country), up to 6·5 mm. long in favourable situations, but generally much less ; and by the dense sessile or subsessile rosettes, the first leaves of which are obtuse and spathulate, the more developed ones acute. The pellucid appendage on the seed is also an excellent character.

Apart from south-west Surrey I have seen specimens from Kingston, Surrey ; Westcott, Surrey (Herb. E. C. Wallace) ; and in Herb. Kew there are seven unnamed sheets from Ryarsh Wood, Kent, collected by A. R. Horwood in June, 1929. These last are the earliest specimens I have seen from Great Britain.—G. M. Ash.

A new species to the British flora, first described in 1879 from N. America.—J. Fraser. I do not know *E. adenocaulon* Haussk. but the specimen received seems to be *E. obscurum*, crossed with *E. tetragonum* or possibly with *E. Lamyi*.—H. W. Pugsley.

Daucus gummifer All. var. *intermedius* Corb. Bedruthan Steps, N. Cornwall, v.c. 1, July 1, 1912. Coll. J. W. White. Comm. I. M. Roper. I appear to have a mixture. Two plants are short and branched from the base. The third is slender, 6in. long, with branches scattered up the stem. This I take to be the variety *intermedius* Corb. I have a specimen from Jersey, 21in. high, with the branches scattered nearly to the top.—J. Fraser.

Galium erectum Huds. Railway embankment near Monkton Combe, N. Somerset, June 2 and 12, 1933.—H. S. Thompson. This is my idea of *G. erectum* Huds., and all the sheets were identical.—E. C. Wallace. This is not typical *G. erectum*, on account of its oblanceolate leaves. It seems to agree with the description of var. *Boræanum* Rouy (Fl. Fr. viii, 15).—H. W. Pugsley.

Galium Mollugo × *erectum* ? Both species growing together and *Mollugo* already in flower, June 12, 1933. Railway embankment near Monkton Combe, N. Somerset.—H. S. Thompson. I would call this *G. erectum* Huds. It might look a little different when more of the fruits are mature, but not much.—J. Fraser. I think this plant is *G. Mollugo* L. var. *dumetorum* Rouy (*G. dumetorum* Jord.). The name appears as British in Druce's *Plant List*, and there are several gatherings in Herb. Mus. Brit. by Marshall and others that might be referred to it. Jordan (*Pugillus*, p. 78 (1852)) says that it is intermediate between *G. erectum* Huds. and *G. elatum* Thuill., differing from the former by its less erect branches, smaller flowers, and stems less strict and thicker at the nodes ; and from *G. elatum* by its much narrower foliage and its early flowering. It may possibly be of the hybrid origin suggested for the present gathering.—H. W. Pugsley.

I am inclined to agree with Mr. Pugsley on these two gatherings ; and although particularly interested in the genus I do not remember being so uncertain as in both of these, which were robust, adjacent and in great profusion.—H. S. T.

Galium palustre L. var. *Witheringii* (Smith) ? Weak, attenuated form with small leaflets hanging from a stone wall, Barrow Gurney Reservoir, N. Somerset, Oct. 6, 1933.—H. S. Thompson. Agrees with Smith's description. The bristles on the edges of the leaves are directed forward, on the midrib beneath, backwards ; on the stem they are reflexed.—

J. Fraser. Mr. Lousley reports that " no panicles are present on the plant received, which is not var. *Witheringii* which has lanceolate leaves and conspicuous prickles on the stem." He doubtless had a weak pieee (which I observed had few if any bristles), from the single large plant on the wall. I purposely did not take it all. Smith says (*English Fl.* I, 1828, p. 200) leaves " on the branehes but 4," as in my gathering. Moreover he described the leaves as " small elliptic-lanceolate." May I again reeommend Smith's most useful and too little known *English Flora*. Thcre are 4 leaves also on lower part of the stem figured in Smith *Eng. Bot.* Ed. 1 and 2.—H. S. T.

Eupatorium cannabinum L. Seedlings. Chew Magna Reservoir, N. Somerset, Sept., Oct., 1933.—H. S. Thompson. " The only British Composite with opposite leaves and florets not yellow."—Gco. Bentham, *Handbook*, 1865.

Cirsium eriophorum Scop. sub-sp. *britannicum* Petrak. Thickly over an acre or more of steep slope by R. Avon, near Oldland, W. Glos., Aug. 18, 1933. " Very rare in W. Glos."—H. S. Thompson.

Centaurea ———. Near Hcreford, July, 1933.—R. J. Burdon. (I have seen no label.—Ed.). A rather small-headed form of *C. obscura* Jord. with deep-brown phyllaries. —C. E. Britton. Fairly pure *C. nemoralis* Jord., and the *f. radiata* C. E. Britton.—J. Fraser.

Centaurea ———. Newton Abbot, S. Devon, July 22, 1933. —R. J. Burdon. Probably a form of *C. nemoralis* Jord. but approaching *C. pratensis* Thuill. in the broad roundish phyllaries at the upper two-thirds of the capitulum. Further gatherings, espeeially if rayed, might be conclusive.—C. E. Britton.

Hieracium iricum Fr. Bank of Tees, Holwiek, Upper Teesdale, Yorks., Aug. 8, 1903.—A. O. Hume. Yes.—E. F. Linton. Comm. S. Lond. Bot. Inst. Yes, eonfirmed by E. F. Linton.—H. W. Pugsley.

Hieracium vagense Ley. Limestone cliffs, . . . Llandudno, Carnarvonshire, June 23, 1905.—A. O. Hume. Comm. S. Lond. Bot. Inst. Good specimens of a rare plant.—H. W. Pugsley.

Hieracium [*cæsium* ? var. *decolor* W. R. Linton]. Cliffs above Marine Drive, Great Orme's Head, ... Carnarvonshire,

June 9, 1905.—A. O. Hume. Comm. S. Lond. Bot. Inst. The specimens received are *H. holophyllum* W. R. Lint., which is another of the rare Hawkweeds of Great Orme's Head.—H. W. Pugsley.

Hieracium [*pseudo-sciaphilum*]. Stone corner of Reservoir, Upper Llanfairfechan, Carnarvonshire, Aug. 8, 1905.—A. O. Hume. Comm. S. Lond. Bot. Inst. This plant has simple hairs mixed with glandular ones on the pedicels and involucres, and should be referred, I think, to *H. deductum* Sudre. It used to be common on the wall-tops about Llanfairfechan.—H. W. Pugsley.

Leontodon autumnale L. [var. *sordidum* Bab. ?]. Pasture on sandstone, near Brislington House, N. Somerset, Aug. 27, 1933. Gathered because at first thought to be *Hypochœris glabra*, which I can never find.—H. S. Thompson. Scarcely var. *sordidum* Bab. which has blackish hairs on the involucre (absent in these specimens), and is usually found I believe, in alpine regions. I have gathered excellent examples of the variety on Ben More and Ben Douran in the West Highlands at 3,000ft.—E. C. Wallace. Not the variety.—J. E. Lousley. I agree to var. *sordidum* because the leaves are coarsely pilose. Both this variety and var. *pratense* (Koch) have the bracts of the capitulum with woolly hairs, rather white in these specimens, but sometimes black.—J. Fraser. I observed on the ground that the plant varied considerably.—H. S. T. Not the variety, which should have the involucres shaggy with blackish hair.—H. W. Pugsley.

Lactuca alpina Hook. f. Glen Doll, Forfar, v.c. 90, July 14, 1921. Coll. E. M. Reynolds. Comm. Dept. of Botany, National Museum of Wales. A beautiful specimen of this rare plant, widely known as *Mulgedium alpinum* (L.) Lessing. —H. S. T.

Gentiana baltica Murb. ? Formby. Sandhills between Liverpool and Southport, W. Lancs., Sept. 28, 1905.—A. O. Hume. Comm. S. Lond. Bot. Inst. The stem of *G. baltica*, which is an annual, still shows the cotyledons at the time of flowering. The allied *G. campestris* is usually biennial, and less lowland.—H. S. T.

× *Symphytum lilacinum* Buckn. (*S. ochroleucum* × *purpureum* × *peregrinum*). By the Land Yeo stream, Wraxall, N. Somerset, v.c. 6, June 11, 1932.—J. W. White. Comm. Ida M. Roper.

Symphytum [*densiflorum* Bucknall. = *S. officinale purpureum* × *peregrinum*], but the corollas were not 'violet' but a beautiful blue and pale mauve blue. Bank of narrow lane near Monkton Combe, but just within N. Wilts., June 2 and 12, 1933.—H. S. Thompson. This does not agree with specimens of the hybrid named by C. Bucknall. From the colour of the corolla and the length of the scales and filaments I should call it type *peregrinum*.—I. M. Roper. I see no sign of hybridity in this : it seems to be pale-flowered *S. peregrinum* Ledeb.—H. W. Pugsley.

Pneumaria maritima (L.) Hill. (*Mertensia maritima* (L.) Gray). The Point, Cemlyn Bay, Anglesey, June 23, 1905.—A. O. Hume. Comm. S. Lond. Bot. Inst.

Myosotis cespitosa Schultz. Coombe Hill Canal, Cheltenham, W. Gloster, v.c. 34, June 13, 1933. More glabrous than usual. —I. M. Roper. Correct.—A. E. Wade. I agree. Gathered rather too young to show the spreading and recurved pedicels. —J. Fraser.

Myosotis palustris L. With abnormal bunches of leaves, due probably to the conditions of drought. Chew Magna Reservoir, N. Somerset, Sept. 15, Oct. 4, 1933.—H. S. Thompson. Yes ; the bunches of leaves are due to short branches under the inflorescence.—J. Fraser. *M. palustris* var. *memor* Kittel. The " abnormal bunches of leaves " are the barren shoots which have become reduced owing to drought. The fruiting pedicels are also rather short, due no doubt to the same cause.—A. E. Wade. The adpressed pubescence of the stem suggests var. *strigulosa* (Reichb.).—I. M. Roper. Probably various forms were gathered.—H. S. T.

Atropa Belladonna L. Bedford Purlieus, near Wansford, Northants, July 23, 1933.—J. W. Carr.

Scrophularia aquatica L. Seedlings and young root-leaves. Chew Magna Reservoir, N. Somerset, Sept.–Oct., 1933.—H. S. Thompson. Correct.—J. Fraser.

Sibthorpia europæa L. Holford, S. Somerset, July 3, Aug. 10, 1933. This now extends to within 50 yards of the main road.—H. S. Thompson.

Veronica filiformis Smith in *Trans. Linn. Soc.* (1791) orig. Asia Minor. Donn in *Hort. Cantab.* Ed. 10, 1823, gives " Levant." Name confirmed at Kew. This delicate little

plant with large blossoms is escaping from gardens into the "wild" state; hence such specimens are sent from Sideot, N. Somerset, April 15, a few from a roadside bank at Exmouth, S. Devon, June 24, 1933, and some younger and earlier specimens from Street, Somerset (originally planted).—H. S. Thompson. The record in Rep. B.E.C. 1932, p. 28, marked with a Maltese Cross as "a certified addition" to the *British Plant List* was based on a cultivated garden specimen sent for identification, so the present Exmouth record will probably be the first of this species from a "wild" situation. Mr. A. H. Carter showed me *V. filiformis* in 1933 well established on a roadside bank near Ockham, Surrey, but it obviously originated from a garden.—J. E. Lousley. I have specimens gathered by the R. Ayr near Ayr in June, 1927 by Mr. R. Mackenzie of Glasgow; this record thus antedating these others.—E. C. Wallace. It matters little which was actually the first record in the wild state, as doubtless all escaped from cultivation. The Sideot, Somerset, station (field side of a garden bank and hedge), where this rather late season a few blooms were seen as early as March 29, has been known to me since about 1928.—H. S. T.

Veronica polita Fries. Vegetable garden, Chew Magna, N. Somerset, Sept. 15, 18, 1933.—H. S. Thompson. I agree. —J. Fraser. Yes.—I. A. Williams. Yes, and var. *Thellungiana* Lehm. marked by the leaves with obtuse teeth and intervening deep obtuse sinuses.—C. E. Britton.

Veronica [*agrestis* L. ?] forma (No. 2661A). Vegetable garden, Chew Magna, N. Somerset, Sept. 15, 1933. The top portion resembles *V. arvensis*. cf. last year's No. 2661 which included one sheet of this misnamed plant.—H. S. Thompson. I think this would be typical, if the fruit had been more mature, mine being pressed flat. I cannot find *agrestis* outside gardens or allotments in Surrey.—J. Fraser. Whatever the plant [2661] distributed in 1932 may have been, it is clear to me that the plant now distributed cannot bear the name of *Veronica agrestis* L. For one thing the subsessile flowers arranged in a spicate manner place it outside the limits of that species, and evidence of hybridity is lacking. It is a lax form of *V. arvensis* L. marked by decumbent habit, with adventitious roots arising from lower part of stem, by the more distinctly petioled elliptical-ovate stem-leaves, by the

unusually elongated inflorescence with the lower flowers widely spaced and their bracts lobate-serrate.—C. E. Britton. Surely this is only a luxuriant form of *V. arvensis* ?—I. A. Williams.

Veronica agrestis L. Vegetable garden, near Chew Magna, N. Somerset, Sept. 15, 18, and Oct. 4, 1933.—H. S. Thompson. Correct. The usual variety *Garckiana* P. Fourn., with capsules glabrescent on the faces and with elongated glandular hairs in the region of the keel.—C. E. Britton. Quite typical.—J. Fraser. Yes.—I. A. Williams.

Veronica persica Poir. [var. *Kochiana* Godr.]. Pocombe quarry near Exeter, S. Devon, v.c. 3, June 4, 1933.—I. M. Roper. I agree. The leaves are small, with 1–3 shallow serratures on each side, and the pedicels are long and filiform. —J. Fraser. Var. *Kochiana* is a plant with a filiform stem and small entire or shallowly-toothed leaves. In this plant the stem is quite stout and the leaf-serrations deep, so it does not meet the requirements of the var. in question.—C. E. Britton. The specimen sent me is rather too stout for good *Kochiana*, but I find this variety grades insensibly into the ordinary var. *Aschersoniana*, as I mentioned in the last Report.—H. S. T.

Veronica persica Poir. ? Vegetable garden, Chew Magna, N. Somerset, Sept. 15, 1933.—H. S. Thompson. I agree.—J. Fraser. The plant received is not *V. persica* Poir. but *V. polita* Fr. The *dehisced* capsule is certainly slightly keeled (but not divergent, I think), and it would be of interest to know whether this character was observed in the living plant, as a keeled capsule is not characteristic of *V. polita* Fr. although present in *V. agrestis* L. which is also distinguished by faint but distinct reticulations on the capsule walls, absent in this case. Both *V. polita* Fr. and *V. agrestis* L. have inflated and rounded capsule-lobes, whereas in *V. persica* Poir. the lobes of the capsule are strongly compressed acute, and the surfaces covered by a net-work of raised ribs.—C. E. Britton. I fear this was a mixed lot. The keeled capsules of some (when dried) perplexed me. There were also four small September gatherings from elsewhere in N. Somerset, some of the plants being extremely small.—H. S. T. My sheet (a single large plant from Chew Magna) is rather perplexing. The shape of the sepals is wrong, also of the capsules. I

think it is a rather large flaccid plant of *polita*. But the capsules appear glabrous, and I have no gathering of either *polita*, *persica* or *agrestis* in which the capsules are not more or less hairy. Were the flowers the small deep blue of *polita* ? —Iolo A. Williams. Some were small, but few were deep blue.—H. S. T.

Veronica praecox All. [Ref. E.11]. Near Barton Mills, West Suffolk, Apr. 16, 1933. New to Britain. See *Journ. Bot.*, 1933, p. 159.—J. E. Lousley. Mr. Lousley is to be heartily congratulated upon this important discovery.—Ed.

Veronica aquatica Bernh. Blagdon Reservoir, N. Somerset, Sept. 6, Oct. 2 and 13, 1933. Minute pale pink or mauve flowers, top petal veined darkest, and no streaks on lowest petal. Leaves strap-shaped to lanceolate, variable.—H. S. Thompson. Correct. As the inflorescence is glandular, it is the var. *glandulifera* Celak. The corresponding variation in the allied plant *V. Anagallis* L. is var. *anagalliformis* (Bor.). —C. E. Britton. A much more highly developed state than the plant from Chew Magna Reservoir. Benquerel quoted by Dr. Druce as the authority for *V. aquatica* had no description, being only a " nomen."—J. Fraser. Both (from Blagdon and Chew Magna) correctly named. The prostrate plants are much like the form which grows at the reservoirs at Tring.— I. O. Williams.

Veronica aquatica Bernh. Chew Magna Reservoir, N. Somerset, Sept. and Oct. 4, 1933. And two sheets from Barrow Gurney Reservoir, Oct. 6. Flowers extremely pale mauve, and little streaked with red. Some of the plants glandular. The Barrow Gurney specimens have glandular flower and fruiting stems, and slightly glandular capsules.— H. S. Thompson. Correct, (Chew Magna) and also var. *glandulifera* Celak.—C. E. Britton. Evidently correct, for the var. *anagalliformis* (Bor.) is glabrous, and this one is glandular.—J. Fraser.

Euphrasia frigida Pugsley var. *laxa* Pugsley. Eight sheets from various localities in Perthshire and Argyllshire, July, 1933. All the specimens have been seen by Mr. Pugsley.— E. C. Wallace.

Euphrasia micrantha Reichb. [Ref. 1566]. Roadside moorland, West of Crianlarich, Mid-Perth, v.c. 88, July 22, 1933.—E. C. Wallace. I agree.—J. Fraser. Mr. Wallace was not likely to have mistaken these.—H. W. Pugsley.

Euphrasia montana Jord. [No. 502]. Widdybank, Upper Teesdale, Durham (very local), June 28, 1933.—H. W. Pugsley.

Melampyrum cristatum Linn. [Ref. E. 24]. Near Langley, North Essex, Aug. 20, 1933.—J. E. Lousley.

Mentha rotundifolia Huds. Meadow in Ashstead Park, Surrey, Sept. 16, 1933. Coll. A. L. Still, under my directions from this very old station.—E. C. Wallace. Correct; tomentum fine.—J. Fraser.

Mentha spicata L. [No. 500]. Naturalised along wood edge near Fowey, E. Cornwall, v.c. 2, Sept. 14, 1933. The scent of these plants varied, but was not identical in any case with that of culinary mint.—H. W. Pugsley. I agree. Very abnormal in the small size of the leaves, but it has been struggling with drought and its common enemy *Puccinia Menthæ*.—J. Fraser.

Mentha citrata Ehrh. Cult. Kew, from Northaw, Potters Bar, Middlesex, Aug. 30, 1933. The capitula of this Mint are always small, but this year they are smaller than usual, and so are the leaves.—J. Fraser. These specimens are interesting as illustrating the effect of cultivation on aquatic Mints. At Northaw I saw *M. citrata* growing four to five feet high, with large leaves: on the contrary the garden plant is much smaller, with poor coarse leaves. At Northaw the Mint is scarcely in flower before October, whereas Mr. Fraser's garden specimens were collected in full flower at the end of August.—J. E. Lousley.

Mentha citrata Ehrh. Marshy spot near Chiddingford, Surrey, Sept. 10, 1933. The finest specimens I have seen. Scent when fresh unmistakeable. I cannot see any sign of connection of this plant with *M. piperita*.—E. C. Wallace. Correct, quite a typical form.—J. Fraser. Correct and still retaining its characteristic odour. In his *Menthae Britannicae* Mr. J. Fraser describes the leaves and other organs of this species as covered with short thinly-scattered adpressed hairs, and adds that the plant is more hairy than Smith's description would allow, but that the hairs are very inconspicuous on calyx, pedicels, and bracts, except under the compound microscope. After examining Mr. Wallace's specimens under a magnification of 66 diameters, I think that Mr. Fraser's observation should be qualified by the substitution of " even "

for "except." The plant distributed would well pass as glabrous.—C. E. Britton. This is a well-known station for the species, which appears to be quite glabrous there. In a Middlesex locality the plant, though similar in general appearance and in scent, is more or less hairy.—I. O. Williams.

Mentha aquatica L. ? var. *subglabra* Baker. Very robust. Border of pond below Chew Magna Reservoir, N. Somerset, Sept. 18, 1933.—H. S. Thompson. Correct, but not extreme. —J. Fraser.

Mentha aquatica L. × *arvensis* (*sativa* L.) ? Collected in two forms as A and B; Shapwick peatmoor, N. Somerset, Aug. 22, 1933.—H. S. Thompson. (A) This is *M. aquatica* L. var. *Lobeliana* Beek., which varies a little on different soils, but has small leaves and small capitula.—J. Fraser. (B) *M. aquatica* L. var. *Lobeliana* Beek., a small-leaved, small-headed form. In clay soil and unbranched the head may get considerably larger.—J. Fraser. *M. aquatica* L., very near var. *capitata* Briquet, I think.—H. W. Pugsley.

Mentha arvensis L. (including two sheets of ? var. *cuneifolia* Léj. et Court.). Vegetable garden, Chew Magna, N. Somerset, Sept. 18, Oct. 4, 1933.—H. S. Thompson. This rounded, obtuse-leaved Mint is *M. arvensis* L. var. *agrestis* (Sole).— J. Fraser.

Melissa officinalis L. A large colony on waste ground adjoining bank of R. Avon, Hotwells, W. Glos., Sept. 3, 1933. —H. S. Thompson.

Littorella uniflora Aschers. Dried up expanses of Blagdon Lake, N. Somerset, Sept. 5, Oct. 2 and 13, 1933. Strangely rare in Somerset and absent from Glos.—H. S. Thompson.

Chenopodium ficifolium Sm. Waste peaty ground, Shapwick station, N. Somerset, July 18 and Aug. 22.—H. S. Thompson. Correct. The dry summer or a dry situation has reduced the characteristic leaves considerably.—J. Fraser.

Chenopodium urbicum L. [Ref. 1814]. Farmyard at Southease, near Lewes, E. Sussex, v.c. 14, Aug. 27, 1933.— E. C. Wallace. Quite good *C. urbicum*.—J. Fraser. Yes, approaching var. *intermedium* Koch.—I. M. Roper. This is not typical *C. urbicum* L., which has triangular and nearly entire leaves. It is var. *intermedium* (M. & K.) Moq., which differs considerably by its coarsely dentate foliage.—H. W. Pugsley.

Chenopodium rubrum L. Seedlings and young plants. Blagdon Reservoir, N. Somerset, Sept., Oct., 1933. I am doubtful if var. *pseudo-botryoides* H. C. Wats. is more than an inconstant form particularly abundant on dried up lakes and reservoirs.—H. S. Thompson.

Chenopodium rubrum L. Minute half-inch seedlings with flower-buds, and one-inch cotyledons (drawn up seeking light) from adjoining crack in the mud. Barrow Gurney (top) Reservoir, N. Somerset, Oct. 6, 1933.—H. S. Thompson. The cotyledons of the smallest seedlings are evidently correct. It is difficult to be sure of them when obscured by a number of leaves. I prefer to paste down seedlings while fresh, on small pieces of white paper, to be mounted on larger sheets. By this plan one can spread out the cotyledons in their natural form, and they do not shrink in drying.—J. Fraser.

Salicornia dolichostachya Moss. Bank of R. Axe, near Axmouth, S. Devon, v.c. 3, Sept. 27, 1933.—E. C. Wallace.

Polygonum microspermum Jord. [Ref. E.12]. West End Common, Esher, Surrey, Aug. 17, 1933. See *Report B.E.C.* 1932, p. 447.—J. E. Lousley. Apparently identical with the *Polygonum* from the same locality that was distributed by Mr. Lousley in 1932, and which was the subject of a lengthy note in *Report B.E.C.* 1932, where it was identified by Mr. Wilmott as *P. microspermum* Jord. The West End Common plant certainly agrees closely with Rouy's description (*Fl. Fr.* xii, p. 113) of Jordan's *P. microspermum* especially in dimensions of nutlet (2 × 1 mm.). The description of this micro-species appears to have been first published in Boreau's *Fl. Centre*, ed. 3, p. 560 (1857). The plant distributed agrees very well with Boreau's account.—C. E. Britton.

Polygonum Hydropiper L. (1) Marshy meadow, Bye Mills, N. Somerset; (2) Shapwick Peatmoor, Somerset, Aug. 22, 1933. The latter in two distinct forms and colours.—H. S. Thompson. Correct; perianth very glandular.—J. Fraser. The striking differences exhibited by the specimens are no doubt due to variations in nutrition.—C. E. Britton.

Polygonum [*petecticale* Stokes]. Damp corner of pasture, near Frenchay, W. Glos., Aug. 5, 1933.—H. S. Thompson. I agree.—J. Fraser. This is *P. Persicaria* L. var. *elatum* Gren. et Godr.—C. E. Britton.

Polygonum [*petecticale* Stokes]. Garden weed at Buckingham Place, Clifton, W. Glos., Aug. 16, 1933.—H. S. Thompson. I agree.—J. Fraser. Is this not a form of *P. Persicaria* with long slender peduncles ?—J. E. Lousley. Both compressed and trigonous nutlets are present in my specimen, which is *P. Persicaria* var. *elatum* G. et G. Compare with the specimen from Surrey sent by Mr. E. C. Wallace under the name *P. nodosum* Pers.—A. E. Wade. A remarkable plant characterised by (1) its much-branched habit, the elongated oblong-lanceolate acuminate leaves, broadest below the middle, slender elongated inflorescences, and glandular peduncles and perianths ; (2) strongly-ciliated ochreae, and nutlets roundish and either flat, plano-convex, or triangular. That it is not *P. petecticale* (Stokes) Druce, is certain, and from the combination of characters I regard this plant as the hybrid *P. nodosum* Pers. var. *erectum* Rouy × *P. Persicaria* L. The characters enumerated under (1) show its affinity with *P. nodosum* Pers. (*P. petecticale* Druce), the long tapering leaves indicating var. *erectum* Rouy as the precise form concerned, and under (2) are the chief features derived from *P. Persicaria* L.—C. E. Britton. Possibly this gathering was not quite homogeneous.—H. S. T.

Polygonum lapathifolium L. ? var. *incanum* Koch. Blagdon Reservoir, N. Somerset, Sept. 5, 1933.—H. S. Thompson. Correct, but not well marked.—C. E. Britton.

Polygonum [*lapathifolium* L.]. Blagdon Reservoir, N. Somerset, Oct. 13, 1933. Leaves narrow, very pointed, and long petioled. All with a dark blotch. An acre or more was pink (crushed strawberry colour) with the flowers.—H. S. Thompson. From the brown nuts about 2 mm. long, and shorter than the perianth, and the presence of a few glands on the peduncles, this appears to be a form of *P. nodosum* Pers.—J. E. Lousley. This is *P. nodosum* Pers., and differs from my var. *inundatum* by the shorter and stouter internodes, the shorter inflorescences and larger nutlets ($2\frac{1}{2} \times 2$ mm.). These differences may be perhaps due to the influence of the dry, hot summer.—C. E. Britton.

Polygonum nodosum Pers. [Ref. 1824]. Swampy part of Dunsfold Common, Surrey, Aug. 23, 1933.—E. C. Wallace. These must be placed to my var. *inundatum*.—C. E. Britton. This comes near *P. lapathifolium* with its obliquely truncate ocreae and seeds that are concave on both faces.—J. Fraser.

Polygonum amphibium L. var. *terrestre* Koch. Arable field on sandstone, W. of Keynsham, N. Somerset, Aug. 27, 1933. Short, ereet, non-flowering shoots not a foot high, with lanceolate leaves.—H. S. Thompson. An interesting small-leaved form of the variety.—C. E. Britton. Most often flowerless on dry land and eultivated fields, but ean bloom where allowed to grow undisturbed in good soil.—J. Fraser. A well marked form with short petioles and rough hairs on the leaves. Can frequently be found in blossom.—I. M. Roper.

Rumex viridis Sibth. ? Holford Combe, S. Somerset. In shade of trees by stream, Aug. 10, 1933. Seeds enclosed in pale yellow granular pericarps.—H. S. Thompson.

Rumex sanguineus L. Saville Place, Clifton, W. Glos. (and near by), June, July, Aug., 1933. Variable in the root-leaves —H. S. Thompson. I agree.—J. Fraser. Yes, the typieal plant with purple-veined leaves.—C. E. Britton. *R. sanguineus* L. var. *genuinus* (i.e. venis purpureis).—Danser.

Rumex maritimus L. Shapwick peatmoor, N. Somerset, July 18, Aug. 22, 1933.—H. S. Thompson. Correct.—J. Fraser.

Rumex pulcher L. Clifton Down, W. Glos., July and Aug., 1933. Chiefly southern and eentral on the Continent of Europe, in Britain it hardly grows N. of the Wash and Denbigh, and in Ireland "thoroughly established in Co. Cork only." (*Cyb. Hibern.* 1898).—H. S. Thompson.

Rumex obtusifolius L. With root-leaves blunter than usual. Saville Place, Clifton, W. Glos., Aug. 1, 1933.—H. S. Thompson. Correet.—J. Fraser. Var. *agrestis* Fries.—J. E. Lousley. *R. obtusifolius* L. probably sub-sp. *Friesii* (Gren. et Godron). —Danser.

Rumex crispus L. forma or × ? Sharpham Peatmoor, Somerset, June 15, 1933. Growing near *R. Hydrolapathum* at side of ditch.—H. S. Thompson. I think *R. crispus* L. exeept probably one leaf.—Danser. Prof. Danser observed in writing to Mr. Wallaee that some of my Docks were gathered too young.—H. S. T.

Rumex elongatus Guss. (see *Journ. Bot.* 1873, 237). Leaves only. On tidal mud of R. Wye, Tintern, Mon., July 20, 1933, with J. E. Lousley. Only one flowering spike was seen, but even three sheets of leaves may be useful.—H. S. Thompson.

Rumex elongatus Guss. Estuarine mud above Kew Bridge, Surrey. [Ref. E.19]. July 1, fruit Aug. 17, 1933.—J. E. Lousley. This plant was first recorded from the Thames banks by Trimen in *Journ. Bot.* 1873, p. 237, and has been noted from various stations between Kew and Putney at intervals during the last sixty years. This year I found it in three different localities between Kew and Mortlake, and judging from my previous experience in searching for the plant the present summer must have been extraordinarily favourable to it. Fruits appeared in some quantity which appears to be rare in this country (*Rep. Watson B.E.C.* 1923/4, p. 259). It is noteworthy that, whereas *R. elongatus* is entirely restricted to the estuarine mud, hybrids of it with other Docks appear on the towing path above. Specimens of *elongatus* were submitted to Dr. K. Rechinger of Vienna, who replies : " *R. elongatus* Guss. is a synonym of *R. crispus* L. ; your specimens belong perhaps to an alien type of this species which I do not know exactly." Whatever the nomenclature may be, the Thames-side " *R. elongatus* " is certainly very distinct from all ordinary forms of *crispus*. The Wye plant, referred by Moss to *R. crispus* var. *planifolius* Sehus. also grows on estuarine mud at Tintern where I examined it in July, 1933, under conditions almost identical with those of the Thames banks at Kew, and I have so far found it impossible to draw any very clear distinction between the Wye and Thames plants.—J. E. Lousley. Distributed from this station in 1923. Vide *Report* 1923–24, p. 259.—H. W. Pugsley. " *R. crispus* L. (mud forms often have little crisped leaves)." —Danser.

Euphorbia stricta L. Rough, bushy ground west of Tintern, Mon., July 20, 1933, with J. E. Lousley, who found it.—H. S. Thompson.

Ulmus stricta Lindley ? Bank of R. Char, close to its mouth, at Charmouth, Dorset, June 30, 1933. For a considerable distance along the left bank, close to the beach, a sort of hedge is formed by a remarkably distinct Elm with flat and very strict spreading branches, rather small leaves, the younger leaves slightly pinkish in colour, rough and hairy, and with paler down at axils of veins beneath. Being on tour, very little was gathered and dried.—H. S. Thompson.

Salix atrocinerea × *aurita* (× *S. Charrieri* Chass.). [Ref. No. 579]. Whyteleaze, Caterham Valley, Surrey, April 13

and July 27, 1930. The above combination, and its synonym have been made by Dr. M. Chassagne in *Bull. de la Soc. Dendrolog. de France*, No. 80 (Paris, 1931).—J. Fraser.

Salix atrocinerea × *nigricans*. [Ref. No. 721]. Cult. Kew, from Sedburgh, N.W. Yorks, April 5 and Aug. 21, 1933. From a small, spreading bush in the garden, about 2ft high, and raised from a cutting in 1924.—J. Fraser.

Salix arenaria × *repens* f. *prostrata* (Sm.). Ham Common, Surrey, April 23 and Aug. 13, 1933. Some of the leaves were collected on Aug. 16, 1931. This form is characterised by long, prostrate shoots, very small catkins, and larger oval-oblong leaves that are usually stipulate.—J. Fraser.

Salix Waldsteiniana Willd. Kanton St. Gallen, Drs. Walo Koch cum B. Floderus, Aug. 31, 1933. This is one of those tantalising Willows of which various forms have received different names. Wimmer places it as a variety of *S. arbuscula*. N. J. Anderson makes it *S. arbuscula* var. *erecta* f. *ovalifolia*. A. and E. G. Camus place it as *S. arbuscula A. Waldsteiniana* Koch. All the other varieties are forms of *S. arbuscula* ; but the plant now distributed is near *S. phylicifolia* in the leaf, and approaching *S. arbuscula* in style and stigmas, and conforms to Willdenow's plant.—J. Fraser.

Ceratophyllum submersum L. Large pond near Congresbury, N. Somerset, Aug. 28, 1933. This pond whence specimens were previously sent, and where probably Dillenius got it in 1726, is still choked with the plant and little else.—H. S. Thompson. Correct, and fruiting. Leaves 3–4 times dichotomous.—J. Fraser.

Allium vineale L. var. *compactum* (Thuill.) ? In long grass close to the R. Chew, below Stanton Drew, N. Somerset, Aug., 1933.—H. S. Thompson. The short, broad spathes, and the compact head of bulbils, with a tiny leaf from the top of some of the bulbils would make this correct for the common form of the Crow Garlic. The bulbils are young compared with mine, though collected a month later. . . .—J. Fraser.

Ornithogalum pyrenaicum L. Younger leaves March 29, flowers June 2 and 12, 1933, from several localities and very different habitats S. of Bath, in both N. Wilts. and N. Somerset. Judging from specimens in bud, June 2, this plant seems not to open properly nor to elongate its spike when kept

in water a week, even with the help of sun and fresh air outside a window.—H. S. Thompson.

Lilium Martagon L. In abundance (in fruit) in a wood below Madgett, Wye Valley, W. Glos., July 21, 1933.—H. S. Thompson.

Gagea lutea Gawler. I had no hesitation in gathering a very few for the Club, because everywhere it flowered so well in 1933, and apparently the plant propagates itself chiefly by the numerous off-shoots from the parent bulb, rather than from seed. Two localities near Bath : seedling leaves, March 29, just within N. Wilts. ; mature plants W. Glos., Apr. 7, 1933.—H. S. Thompson. My specimen with six flowers on it is perfect, one flower more than l'Abbé Coste admits.—J. Fraser. One of this W. Glos. gathering had 8 flowers, another 7 flowers and two had 6 flowers.—H. S. T.

Paris quadrifolia L. With 6 leaves. Many had 5 leaves and one had 7. Another has 5 sepals. A large colony, some 2ft. 6in. high, in a wood above Limpley Stoke, N. Wilts., June 12, 1933.—H. S. Thompson.

Juncus articulatus L. approaching *nigritellus* in the abruptly pointed capsule. Shapwick Peatmoor, N. Somerset, July 18, Aug. 22, 1933.—H. S. Thompson. My sheet from the banks of the Thames, Middlesex, opposite Kingston, varies in a similar way in having some of the capsules abruptly pointed. —J. Fraser.

Sagittaria sagittifolia L. fruits. Whitmore Common, Surrey, Sept. 3, 1933.—E. C. Wallace. The fruits still show that they are trigonous, apiculate and winged, but very much compressed at maturity.—J. Fraser.

× *Potamogeton Bennettii* Fryer (*P. crispus* × *pusillus*). [Ref. E.4]. Stream near Albury, Surrey, Sept. 9, 1933. See *Rep. B.E.C.* 1932, pp. 118 and 452.—J. E. Lousley. All the plants on the two sheets submitted to me were microscopically examined and are correctly named. Both sheets showed spikes of abortive flowers on peduncles 15 mm. long—influence of *P. pusillus*—and the youngest leaves on each plant possessed minutely denticulate margins. The plants were well supplied with characteristic winter-buds and clearly these are their sole means of reproduction.—W. H. Pearsall. Correct. The short branches with narrow leaves are well shown.—J. Fraser.

Potamogeton panormitanus Biv. Bern. [Ref. 1858]. Marsh ditches near Lewes, E. Sussex, v.c. 14, Aug. 27, 1933.—E. C. Wallace. Yes ; as far as the leaves are concerned, no fruit being present.—J. Fraser. Well-prepared specimens, which show the connate stipules that distinguish this species from *P. pusillus* L.—H. W. Pugsley.

Potamogeton pectinatus L. With ample ripe fruits. Barrow Gurney Reservoirs, N. Somerset, Oct. 6, 1933. Mostly from enormous masses left stranded on the N. embankment of the middle reservoir. Some of the filiform pedicels are 7 and 8 inches long. The extra packets of fruits were mostly from the top Reservoir, then 18ft. 6in. below H.W. level.—H. S. Thompson. I agree. Very well developed fruit.—J. Fraser. Yes, a common form of the var. *diffusus* Hagstr.—W. H. Pearsall.

Ruppia rostellata Koch. Ditch by the Cuckmere, near the sea, E. Sussex, v.c. 14, July 2, 1933.—E. C. Wallace. Yes.—W. H. Pearsall. Correct.—J. Fraser.

Zostera nana Roth. [No. 503]. Mud flats opposite Golant, near Fowey, Cornwall East, v.c. 2 ; abundant but apparently not flowering. Sept. 22, 1933. This species may be distinguished from small forms of *Z. marina* L. by the retuse instead of rounded apex of its leaves.—H. W. Pugsley.

Cyperus fuscus L. Shalford, Surrey, Sept. 7, 1933.—R. J. Burdon. Discovered there in 1846 by J. D. Salmon, *Phyt.* 11, 609 (1847). C. E. Salmon pointed out in his *Fl. of Surrey*, 1931, " it seems somewhat uncertain—even intermittent—in its appearance, according to the evidence of various observers of repute. . . . not found '86–7 " . . . " See . . . *W.B.E.C.* 1887–8, *J.B.* 1893, 369." The note by F. H. Ward in our Report for 1887 says : " The pond . . . was completely dried up this year, and only a few dwarf specimens could be found." It was extremely scarce in its chief Somerset station last year.—Ed.

Kobresia bipartita Dalla Torre. Widdybank, Upper Teesdale, Durham, June 28, 1933. [No. 501].—H. W. Pugsley.

Kobresia bipartita Dalla Torre. Abundant over a small area on the wet moorland above Killin ; alt. ca. 2,000 ft. Mid-Perthshire, v.c. 88, July 30, 1933. Coll. R. Mackechnie and E. C. Wallace. The nomenclature of Schinz and Keller (1905) is *Cobresia bipartita* (Bell.) Dalla Torre.—Ed.

Carex arenaria L. Sandy heathland, Coates Common, W. Sussex, June 25, 1933. One of the few inland Sussex stations for this usually maritime sedge.—E. C. Wallaee. I agree. It is a pity no bit of the rhizomc was collected.—J. Fraser.

Carex atrata L. Roek ledges, Cam Chreag, near Killin, Mid-Perth, v.c. 88, Aug. 1, 1933.—E. C. Wallace.

Carex sp. By Hedge Court Mill-Pond, Surrey. [Ref. E.18]. July 12, 1933. This plant recalls *C. Hudsonii* in the caespitose habit, shiny lower leaf sheathes, and the frequency with which small male spikes oecur at the extremities of the female spikelets and with which more than one wholly male spike oecurs. It is intermediate between *Hudsonii* and typical *Goodenowii* both in the size of the plants and the size of the spikelets ; while the nuts, though larger, do not exhibit the venation of the last mentioned species. They oceurred in very wet ground, normally partially submerged, on the margin of the pond associated with *C. vesicaria* and forms of *Goodenowii.* The present gathering matches plants collected by W. H. Beeby in 1885 and 1886, and apparently not gathered since, a note on which appears in Rep. B.E.C. 1895, p. 498, where the name *C. turfosa* Fries is suggested. There are four sheets from Beeby's collection in the Herb. S. Lond. Bot. Inst. dated June 21, 1886, July 11, 1886, and two dated Sept. 12, 1886, and the original notes from the referces mentioned in the above note are attached. Fryer suggested that the plants eame under *C. stricta* Good. on aecount of the resemblanee to a plant gathered by him near Welches Dam, Cambs., which, however, is not identieal. Almquist's note suggests caution, espeeially as he remarks on the absenee of the fibrillæ, and he suggested the name " var. *turfosa* (Fries p.p.) Almq."—not *C. turfosa* Fries as has crept into our eatalogues. Arthur Bennett, with knowledge of the previous determinations, said he " did not see how to name them otherwise " than *C. turfosa* Fries " using the name in the same sensc as Andersson." That this name eannot bc satisfaetorily applied is evident, as that plant has glumes almost as long as the nuts (illustrated by Andersson, *Skand. Cyper.* fig. 58), whereas Beeby's plants have glumes falling far short of the nuts as in *Goodenowii.* Moreover *C. turfosa* Fr. is accepted by the best Continental authorities as the hybrid between *C. Hudsonii* and *Goodenowii,* and the former parent does not occur anywhere near Hedge

Court Pond. At first Beeby wrote "The plant forms large dense tufts, but I can detect no fibrillæ at the base of the stem." Later on he writes ". . . . the speeimens eollected early (May 16, 1887) show the filamentous network to the leaves quite distinctly, but it seems to disappear later when the fruit is ripe" (*Rep. B.E.C.* 1895, p. 499). None of these May specimens appear to be preserved, but it is worth noting that the plant grows with *C. vesicaria* with only slightly broader leaves, and that speeies when young shows a conspicuous netting round the sheathes which deeeived me on my first visit. Although the present plant is plainly not the *C. turfosa* of Fries in *Bot. Not.* 1823, n. 7, p. 104; and 1845, n. 7–8, p. 117, or of most Continental works, (e.g. Neuman, *Sveriges Flora*, 707 (1901); Rouy, *Fl. Fr.* xiii, 503; Husnot, *Cypéracées* 31, t. 7 (1905–6)) it may well be the var. *turfosa* of *Goodenowii* (sub. nom. *C. nigra* Linn.) in Beck *Fl. von Nieder-österreich*, 136 (1893). The present gathering appears to belong to an extreme form of *Goodenowii* for whieh at present I know of no satisfactory varietal name. I have seen similar specimens at the head of Loeh Tummel where they also grew in very swampy ground. Specimens from Scotland eollected by E. S. Marshall and determined by Kukenthal as *C. turfosa* Fries are very different. I hope to colleet further examples next year.—J. E. Lousley.

Carex montana Linn. Chailey Common, East Sussex, June 25, 1932. When I visited this Common on May 5 the ground had reeently been swept by a fire which had burnt off the young leaves of some of the plants of *C. montana*. As a result they had thrown up abnormal leaves resembling those of *C. pilulifera* whieh also grows there. Careful examination has convinced me that the plants were not hybrids, but the possibility of such a hybrid oeeurring should not be lost sight of.—J. E. Lousley.

Carex ericetorum Poll. Near Eriswell, W. Suffolk, June 4, 1933. [Ref. E.9].—J. E. Lousley. This rare sedge is far more conspicuous in flower than in fruit, and hence fruits are inadequately represented in most herbaria. The few specimens now contributed were gathered from a loeality where it is exceedingly plentiful, though, whereas the ground was erowded with the plants in flower in April, the large majority of them had either dried up or failed to set seed, so that in June only a fraetion of the total number were to be

found.—J. E. Lousley. Very small speeimens of this species, but correet.—J. Fraser.

Carex lepidocarpa Tauseh. [Ref. 1878]. Woodland on elay, near Brook, Surrey, June 24, 1933.—E. C. Wallaee. I agree.—J. Fraser. I think this is a shade-grown form of *C. flava* L. var. *minor* Towns. Good specimens of *C. lepidocarpa* Tauseh from Zürieh have been contributed this year by Dr. Walo Koeh.—H. W. Pugsley.

Carex Œderi Retz. [var. *cyperoides* Marss.]. Shapwiek Peatmoor, N. Somerset, Aug. 22, 1933.—H. S. Thompson. I should not refer this plant to var. *cyperoides* Marss. Vide Report, 1930–31, p. 89.—H. W. Pugsley. The three specimens reeeived are excellent examples of the Shapwiek "var. *cyperoides*" on whieh there is a useful note in White's Flora of Bristol, p. 636 (1912), and whieh is said to have been sometimes confused with *C. extensa*. However, these speeimens seareely agree with ". . . foliis latis . . ." in Marsson's description (*Fl. von Neuvorpommern*, p. 537 (1869), and as suggested by Mr. Pugsley (*Rep. Watson B.E.C.* 1930/1, p. 89) they are probably best left under var. *elatior* Anderson. Sce also *Rep. Watson B.E.C.* 1921/2, p. 189. It would be interesting to know whether Mr. Thompson *selected* the speeimens or whether speeimens with less aggregated spikes grew with them. Marshall (*Rep. B.E.C.* 1915, p. 381) said this plant was very variable in size, and breadth of leaves at Shapwick.—J. E. Lousley. Yes, specimens with less aggregated spikes did grow with some of these, as I have observed in other parts of the great Peatmoor. I regret I had forgotten what Mr. Pugsley and others had published on this perplexing and very polymorphic plant from the Turfmoor.—H. S. T.

Carex lasiocarpa Ehrh. Swamp by the river, east of Warcham station, Dorset, June 18, 1933.—E. C. Wallace.

Agrostis setacea Curt. Chobham Ridges, Bagshot, Surrey, June 25, 1933.—J. Fraser. It was from the neighbouring Bagshot Heath that the first rccord of Wm. Curtis was made (Curtis, *Fl. Londin.* vi).—Ed.

× *Polypogon littoralis* Smith. (*Agrostis alba* × *P. monspeliensis*). With parents, All-Hallows-on-Sea, E. Kent, July 2, 1933. [Ref. E.3].—J. E. Lousley. This rare hybrid and beautiful grass grew plentifully among *Scirpus maritimus* by the side of a brackish diteh in a situation where it is nndoubtedly native. I direeted Mr. H. S. Redgrove to this

new locality later in the season, and he informed me that he has arranged with the owners of the estate to protect this rarity against destruction in the course of the " development " of this new resort.—J. E. Lousley. Fine specimens of this rare hybrid grass.—H. W. Pugsley. *Polypogon lutosus* (Poir.) Hitchcock (*P. littoralis* (With.) Sm.).—C. E. Hubbard. Yes ; it agrees with Smith's species, except that it is three times as tall. . . .—J. Fraser.

Deschampsia setacea Richter (*a*) Normal form, (*b*) Form with congested spikelets. Pudmore, near Thursley, Surrey, July 30, 1933. [Ref. E.13].—J. E. Lousley. Only one plant of the aberration occurred from which all the specimens of form (*b*) were collected.—J. E. Lousley. Both correct. . . . —J. Fraser. *Deschampsia setacea* (Huds.) Richt. Both correct. Similar specimens to form (*b*) were collected by H. C. Watson in 1879 at Hawley Pond, N. Hants, and in 1869 on the margin of Fleet Pond, N. Hants.—C. E. Hubbard. According to *Top. Bot.*, Ed. 2, Watson's correspondent J. B. L. Warren (Lord de Tabley) first found the ordinary type in N. Hants and also in Surrey. But apparently Watson first *recorded* it from Surrey (Salmon, Fl. of Surrey, 1831).—H. S. T.

Deschampsia [*setacea* Richter]. Trelleck Bog, Monmouth, July 21, 1933, with J. E. Lousley.—H. S. Thompson. All specimens sent are *D. flexuosa* Trin.—E. C. Wallace. Though on the ground I suggested these might be *setacea*, I regret that through a misunderstanding the few specimens sent to the Club were wrongly named. Since 1903, on finding an abundance of this plant new to S.E. Yorks, repeated search in suitable ground elsewhere has been unsuccessful.—H. S. T.

Koeleria gracilis Pers. var. *britannica* Domin f. *glabriflora* Domin *in lit.* Hog's Back, Guildford, Surrey, June 19, 1933. The distinctive feature of this form is that the spikelets are glabrous.—J. Fraser. *K. britannica* Domin f. *glabriflora* Domin.—C. E. Hubbard.

Poa alpina L. Wet rocks in gullies on Cam Chreag, near Killin, alt. c. 3,000ft., Mid-Perth, v.c. 88, Aug. 1, 1933.—E. C. Wallace. Yes ; but the proliferous form of it. . . .—J. Fraser. Is not the viriparous state the commoner in the Highlands, as it often is in the Alps ? It is also the only form I gathered in Co. Kerry.—H. S. T.

Poa palustris L. Disused brick pit, Lower Lode, Tewkesbury, W. Gloster, v.c. 34, June 13, 1933.—I. M. Roper.

Rightly named. The pale brown spot on the outer pales is very characteristic.—H. W. Pugsley. Correct. The tips of the glumes are much more tipped with purple than I have previously noticed, but the specimens are young.—J. Fraser. Yes.—C. E. Hubbard.

Festuca rigida Kunth var. *patens* (Coss. & Dur.). Cultivated in Lady Davy's garden at West Byfleet, Surrey, July, 1933. Cosson & Germain (*Fl. des Environs de Paris*, 1861, p. 842) give a description of " S.-v. umbrosa (*Sclerochloa patens* Presl. Cyp. et Gram. Sic. 45)—Plante plus grêle. Rameaux et ramuscules de la panicule très étalés," which seems to fit Lady Davy's plant better than Rouy's " Feuilles plus larges " and Husnot's " Plante plus grande," if " grêle " is equivalent to the Latin " gracilis " (Petit Larousse, 1928, p. 467).—J. E. Lousley. Correct. . . . Cultivation has greatly increased its height.—J. Fraser.

Festuca rottbœllioides Kunth. Seaton, S. Devon, about a roadside wall, June 28, 1933.—H. S. Thompson.

Bromus tectorum L. Near Thetford, W. Norfolk, June 4, 1933. [Ref. E.17].—J. E. Lousley. See. *Rep. B.E.C.* 1885, p. 140 (which antedates the first record given in Nicholson's *Fl. Norfolk*), and *Journ. Bot.* xxv, p. 89 (1887). This grass which has been well established on the heath near Thetford for nearly fifty years still exists in fair quantity, growing with *Bromus sterilis* which it closely resembles in habit. Its existence was seriously threatened during the War by a military camp, and, although it has survived that crisis, its destruction in the near future is almost certain. Under the afforestation scheme the heath has been planted with young Conifers which are now several years old, and their annual growth will rapidly increase until the Bromus is exterminated. —J. E. Lousley. Correct.—J. Fraser. Yes.—C. E. Hubbard.

Agropyron repens Beauv. var. [*Leersianum* S. F. Gray. ?]. New Passage, W. Glos., growing with awned form of *A. acutum* (= ? *junceum* × *repens*), July 20, 1933, with J. E. Lousley.—H. S. Thompson. *A. repens* Beauv. var. *dumetorum* S. F. Gray.—C. E. Hubbard. Mr. Lousley is in no sense responsible for my confusion in regard to the two New Passage grasses.—H. S. T.

Agropyron pungens R. et S. Avon bank, Hotwells, W. Glos., July 20, 1933.—H. S. Thompson. Correct.—J. Fraser. Correct.—C. E. Hubbard.

Agropyron pungens var. *aristatum* Hack. Alluvial ground by R. Avon, close to Clifton Bridge station, N. Somerset, Aug. 3, 1933. See last Report.—H. S. Thompson. Yes.—C. E. Hubbard.

Agropyron [*acutum* (DC) = *junceum* × *repens* ?]. Strongly awned ; the *repens* parent was probably the var. *Leersianum* S. F. Gray, with which it was growing. Leaves very broad. New Passage, W. Glos., July 20, 1933, with J. E. Lousley.—H. S. Thompson. *A. pungens* R. & S. var. *aristatum* Hack.—C. E. Hubbard. Mr. Hubbard doubts whether *A. acutum* (of England) is a hybrid between *A. junceum* and *A. pungens*. Last year he and Dr. Turrill found it in several places on the N.W. coast of Norfolk, but though it was growing between *junceum* and *pungens*, he thinks we should have experimental proof before definitely stating it to be a hybrid.—C. E. Hubbard *in litt.*

Cryptogramme crispa Br. Near Thirlmere, Cumberland, Aug., 1864. Ex. Herb. Thos. Rylands.—Comm. Dept. Bot., N. Mus. of Wales.

Lastrea aemula Brack. Combe above Holford Combe, S. Somerset, Aug. 10, 1933. A second locality recently discovered by Mr. H. Corder.—H. S. Thompson. My specimen is *L. dilatata* Presl.—H. W. Pugsley. I fear one, or perhaps two, small *dilatata* got into this parcel.—H. S. T.

Polypodium vulgare L. var. *semilacerum* Link. Miss Sherring's garden at Hallatrow, near Bristol, Aug. 1, 1933. See last Report.—H. S. Thompson. Right ; but the fronds lack the sori which those distributed last year had, on their apical and shallowly lobed portion. In this state it resembles the var. *cambricum*, which is barren. The variety was plentiful in Scotland in the sixties and seventies of last century, but it was originally found by the late Mrs. Delves in Co. Wicklow, and named the Irish Polypody.—J. Fraser.

Equisetum sylvaticum L. var. *capillare* (Hoffm.). Fruiting spikes from Holmwood Common, Surrey, May 6, 1933.—E. C. Wallace.

Equisetum hyemale L. Cat's Clough (sic.) Ex. Herb. Thos. Rylands. Comm. Dept. of Bot., National Museum of Wales. I agree. Many of the sheaths at the nodes are notable for having lost the black ring at the base.—J. Fraser.

FLORA HELVETICA

PLANTS CONTRIBUTED BY DR. WALO KOCH

Aquilegia atrata Koch. Kt. Zürich, Glattal: Flachmoorwiesen beim Goldenen Tor Kloten. Ca. 425 m.s.m., 25/6/1933. —Leg. Walo Koch.

Cerastium pumilum Curt. ssp. *obscurum* (Chaub.) Sch. & Th. Kt. Zürich, Limmattal: Oedland beim Bahnhof Schlieren. Ca. 390 m.s.m., 23/5/1933.—Leg. Walo Koch.

Ribes petraeum Wulfen. Engadin: Laret zwischen Sils und Isola. Ca. 1850 m.s.m., 28/6/1933.—Leg. Frau E. Koch.

Laserpitium prutenicum L. Kt. Schwyz, Linthebene: Stafelriet bei Tuggen. Molinietum coeruleae. Ca. 412 m.s.m., 17/8/1933.—Leg. Walo Koch.

Galium pedemontanum (Bell.) All. Kt. Wallis: Am südexponierten Hang zwischen Naters und der Massaschlucht. 750 m.s.m., 3/6/1933.—Leg. Walo Koch.

Erigeron annuus (L.) Pers. verus. Kt. Zürich: Bahndamm bei Kloten. Ca. 450 m.s.m., 25/6/1933.—Leg. Walo Koch. Originally from N. America.—H. S. T.

Erigeron ramosus (Walter) B.S.P. (= *E. annuus* auct. plur. europ., non L.). Kt. Zürich: Bahndamm bei Kloten. Ca. 450 m.s.m., 25/6/1933.—Leg. Walo Koch.

Achillea tomentosa L. Kt. Wallis: Les Follaterres près Brançon. Festucetum vallesiacae. 500 m.s.m., 5/6/1933.—Leg. Walo Koch.

Rhododendron ferrugineum L. Kt. Graubünden; Sertigtal: Linker Talhang bei Sertig-Dörfli. Ca. 2000 m.s.m., 23/7/1933. —Leg. Walo Koch.

Veronica montana L. Kt. Zürich: Sihlwald. Ca. 550 m.s.m. Fagetum silvaticae., 15/6/1933.—Leg. Walo Koch.

Melittis Melissophyllum L. Kt. Zürich, Limmattal: Risitobel bei Weiningen. 395 m.s.m. Niederterrasse. Eichenwald. 20/5/1933.—Leg. Walo Koch.

Euphorbia Seguieriana Necker. Kt. Wallis : Rhonedamm bei Brançon. Ca. 460 m.s.m., 5/6/1933.—Leg. Walo Koch.

Salix Waldsteiniana Willd. Kt. St. Gallen, Toggenburg : Risiboden ob den Schwendiseen bei Wildhaus. Ca. 1400 m.s.m., 31/8/1933.—Leg. Walo Koch cum B. Floderus, M.D. See note on p. 233.

Orchis paluster Jacq. Kt. Zürich, Glattal : Brandriet bei Kloten. Schoenetum nigricantis. 425 m.s.m., 25/6/1933.—Leg. Walo Koch.

Potamogeton natans L. × *nodosus* Poir. Planta statu florendi rarissima ! Kt. Zürich : In der Glatt bei Glattbrugg. Ca. 425 m.s.m., 27/6/1933.—Leg. Walo Koch.

Cyperus flavescens L. Kt. Schwyz, Linthebene : Stafelriet bei Tuggen auf einem feuchten Wege. Ca. 412 m.s.m., 17/8/1933.—Leg. Walo Koch. Closely allied to *C. fuscus*, but . . . with obtuse scales to the spikelets.—J. Fraser. And even more widely distributed, for it is found in America and Australia, and (like *fuscus*) in Europe, Asia and N. Africa.—H. S. T.

Carex Pairaei F. Schultz. Kt. Zürich : Lägern bei der Hochwacht. Laubwald. Ca. 850 m.s.m., 18/6/1933.—Leg. Walo Koch.

Carex strigosa Hudson. Kt. Zürich : Sihlwald, im Bachtobel. Ca. 550 m. Fraxinus-Carex remota Association. 15/6/1933.—Leg. Walo Koch.

Carex lepidocarpa Tausch. Kt. Zürich : Winikerwiesen bei Uster. Schoenetum ferruginei. Ca. 460 m., 4/7/1933.—Leg. Walo Koch.

Agrostis interrupta L. Kt. Wallis : Näters, am Südhang gegen die Massaschlucht. Ca. 750 m.s.m., 3/6/1933.—Leg. Walo Koch.

Festuca heterophylla Lam. Kt. Zürich : Lägern bei der Hochwacht. Laubwald. Ca. 850 m.s.m., 18/6/1933.—Leg. Walo Koch.

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	s.	d.
Ash, G. M.	10	6
Ash, Mrs.	10	6
Bergens Museum	10	6
Bickham, S. H. (the late)	10	6
Biddiscombe, W.	10	6
Botanical Dept. British Museum	10	6
Botany School, Cambridge	10	6
Burdon, Preb. R. J.	10	6
Carr, Prof. J. W.	10	6
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Dell, J. E.	10	6
Druce, F.	10	6
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Fraser, J.	10	6
Geldart, Miss A. M.	10	6
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Martin, Rev. W. K.	10	6
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Ransom, F.	10	6
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	£29	10	3

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	£	s.	d.	£	s.	d.
Printing—						
Forty-ninth Annual Report (200 copies) 44 pages and wrapper	24	10	9			
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				27	6	9
Working Expenses—						
Distributor	1	10	0			
Secretary: Envelopes and postage of Reports ...		13	6			
				2	3	6
				£29	10	3

31*st December*, 1933.

G. GOODE,
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TREASURER'S BALANCE SHEET, 1934

Receipts

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Expenditure

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				27	19	6
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Lt.-Col. A. H. Wolley-Dod, Berkeley Cottage, Mayfield, Sussex.

THE CLOSING DOWN OF THE CLUB

After much correspondence, unfortunately a number of members did not reply to the recent circular on the vexed question of closing down the Club or accepting the invitation from the B.E.C. to amalgamate, on the understanding that the latter's Committee would agree with their Secretary's suggestion to alter the title to

THE BOTANICAL SOCIETY of the BRITISH ISLES
(Incorporating the B.E.C. and the Watson B.E.C.).

Sixteen members desire such amalgamation, seventeen vote for closing down entirely, two leave it to the officers to decide and two are neutral. Though wishing that a more definite vote were given, and appreciating the friendly offer of the senior Club (to which many of us already subscribe) the officers feel that the Watson Club had better close without union with any other Society.